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OF

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A WORK
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By *JOHN SIMS*, M.D.
Fellow of the Royal and Linnean Societies.

VOL. XLIX.
Being the Seventh of the New Series.

The Flowers, which grace their native beds,
Awhile put forth their blushing heads,
But e'er the close of parting day,
They wither, shrink, and die away;
But these, which mimic skill hath made,
Nor scorched by suns, nor killed by shade,
Shall blush with less inconstant hue,
Which Art at pleasure can renew. Lloyd.

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MDCCCXXII.

1894, Jan. 17.
Parkman Bequest.

Transferred to
Arnold Arboretum.
1894, April 3.

1894, Jan. 17.
Parkman Bequest.

Transferred to
Arnold Arboretum.
1894, April 3.

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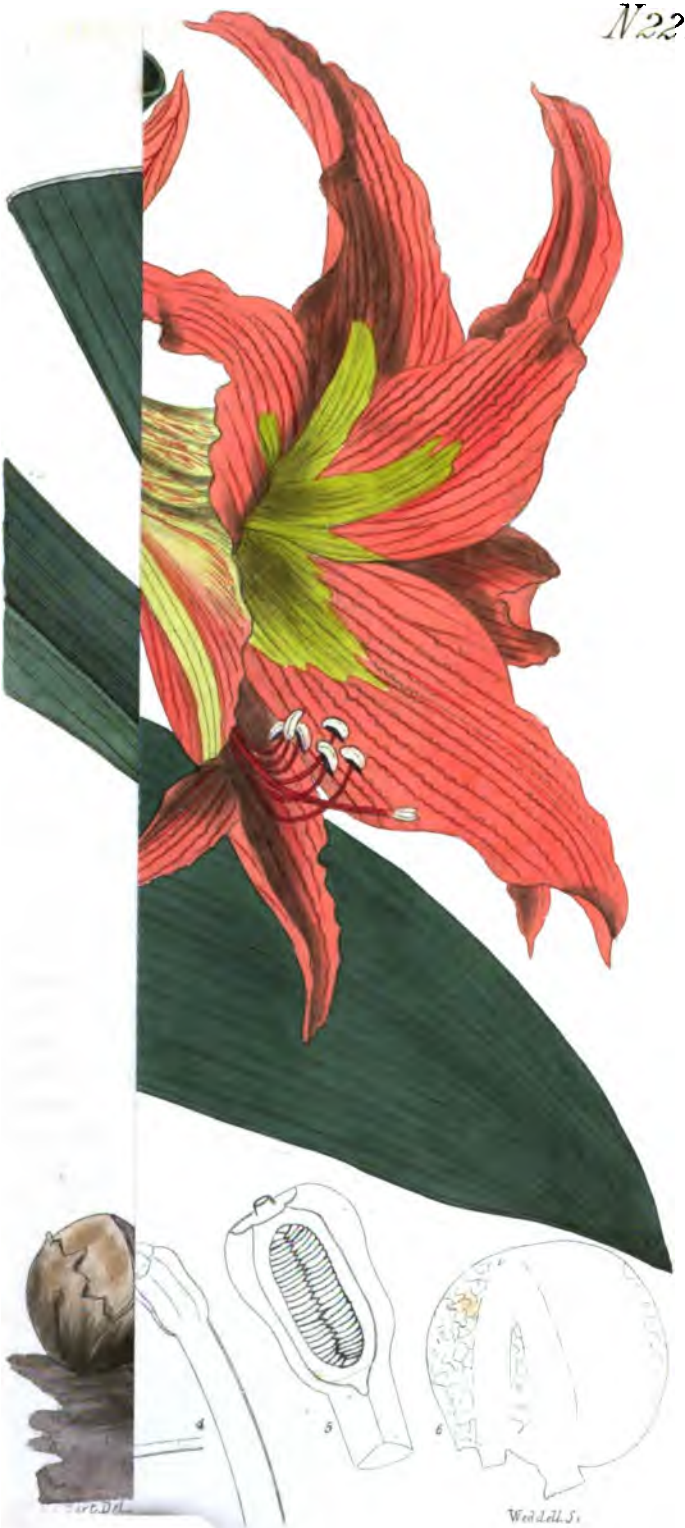

art. Del.

Weddell S.

HIPPEASTRUM PULVERULENTUM. BLOOM-LEAVED KNIGHT'S-STAR LILY.

****

Class and Order.

HEXANDRIA MONOGYNIA.

Generic Character.

Bulbus subrotundus. *Folia* bifaria. *Scapus* 2—7-florus, pedunculatus, cavus. *Germen* trigonè et subturbinatè oblongum, mediâ parte paullùm constrictum, diversâ directione a tubo et pedunculo declinatum. *Tubus* extùs trigonè sub-infundibuliformis, exterarum laciniárum marginibus summâ parte extùs imbricantibus. Tubi *faux* arcta, obliquè latere inferiore abbreviata, parte superiore intùs vel lævi, vel gibbo parvulo munitâ, vel fimbriatâ, vel calyptratâ. *Laciniarum* quaterna discrepantia, exterarum superior duabus latior, internarum inferior duabus angustior. *Filamenta* declinata, imæ laciniæ adpressa, assurgenter curvata, quaternâ longitudinis discrepantiâ, quaternâ quoque positura variatione gradatim tubo infra laciniarum junctionem inserta, externa internis breviora, sed ea tantùm quæ basi consimilium laciniarum supposita sunt longitudine et positurâ consimilia; superius minùs abbreviatum, imum minùs elongatum; superius altiùs, imum profundiùs insertum. *Stylus* declinatus. *Stigma* trilobum, sæpè trifidum. *Capsula* germine erectior, 3-loc. 3-valv. extus profundè trisulcata. *Ovula* multa, biseriatim cumulata, marginibus imbricantibus, angulo interiori loculi alligata. *Semina* uno ordine conserta, plana, integumento exteriore nigro, margine foliaceo cavo, interiore separabili, albumini magis conformi, *albumine* obovatè plano. *Embryo* radiculâ integumenti interioris basi acuminatæ, sed non exterioris umbilico approximatâ. W. H.

Specific Character and Synonyms.

HIPPEASTRUM *pulverulentum;* laciniis exteris latioribus, foliis cinereo-pulverulentis basi purpureâ. *Fulgido* affine, bulbo et foliis majoribus, pedunculis minùs

erectis, germine longiore minùs declinato, tubo lævi magis cernuo, filamentis magis fasciculatis.

AMARYLLIS *pulverulenta* hortulanorum.
AMARYLLIS acuminata. *Bot. Reg.* 534.
HIPPEASTRUM pulverulentum. *Nobis in appendice.*

DESCR. *Bulb* four inches in diameter or larger, bearing blind offsets, which is perhaps peculiar to some of the species with the mouth of the tube smooth. *Leaves* exceeding two inches in width and two feet in length, deep green, conspicuously covered with a cinereous bloom, purple at their base; with a thick margin which is curved downwards. *Scape* about or under two feet, purple at the bottom. *Spathe* withering early. *Peduncles* about six, sloping more than those of *fulgidum*. *Germen* longer and less declined. *Tube* more cernuous, about an inch long at top, smooth at the mouth. *Filaments* crowded together, the upper laterals not divaricating as in *fulgidum*. *Laciniæ* a little broader in the middle than those of *fulgidum*, but not more pointed. *Ovules* about 52 in a cell. The plant figured in the *Bot. Reg.* is described as having the germen green, the tube greenish yellow, and the limb paler than *fulgidum*. That which is here represented, had the germen tinged with red, the tube marked like that of *fulgidum*, the limb paler than *fulgidum* v. *miniata* (*supra* 1943), but a little darker than the usual colour of *fulgidum*, and it appears to be a finer variety than Mr. GRIFFIN's plant. The name of AMARYLLIS *pulverulenta* was given to it above a year ago, and pretty generally adopted by those who cultivated it, and Mr. GRIFFIN's plant was so labelled. There does not appear to have been any sufficient cause for altering the name to *acuminata;* on close comparison of its flowers with those of *fulgidum* blown at the same time, the petals are not in the least more pointed, but a little broader in the middle. It is very closely allied to *fulgidum*, but the eye distinguishes it at once by the strong bloom upon its leaves, which is impressed also on the mules produced from *Reginæ* by its pollen. It is distinguished also by the size, thickness, and bent margin of its leaves, the size of its bulb, the peduncles being less erect, the germ less declined and longer, the tube more cernuous and a little shorter (not quite an inch on the upper side), the upper lateral filaments not straddling apart, the spathes withering before the expansion of the flowers, which remains green and erect in *fulgidum*, and the more numerous ovules.

The name of AMARYLLIS having been given by LINNÆUS originally to Belladonna with a reason assigned, it has been thought expedient to leave the name Amaryllis to that plant and its congeners; and to detach the occidental group (to which as more numerous it had been proposed to preserve the known appellation), under the name of HIPPEASTRUM, or Knight's-star lily, following the idea which suggested the name *equestre* for one of the species. See Appendix, Prelim. treatise and article Hippeastrum. *W. H.*

References to the figures of the dissections.

1. The style, and stigma expanded. 2. The ripe seed. 3. The embryo and albumen taken out of the inner integument. 4. Peduncle, germen, and tube, two petals being cut off to shew the obliquity of its mouth and the insertion of the filaments. 5. Germen magnified, shewing the ovules in one cell. 6. An ovule greatly magnified.

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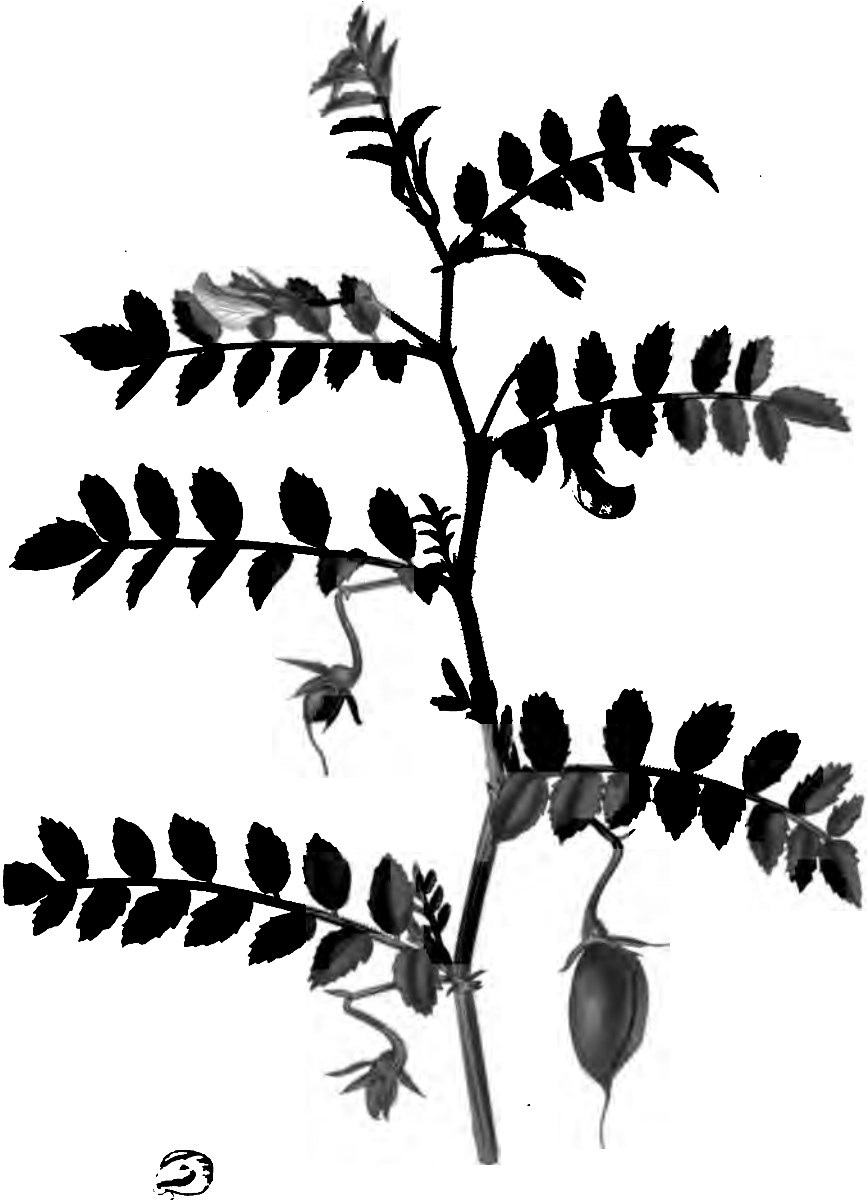


J. Curtis. Del. Pub by S. Curtis. Walworth Nov 1 1821. Weddell Sc

CICER ARIETINUM. CHICHES OR CHICH-PEA.

****

Class and Order.

DIADELPHIA DECANDRIA.

Generic Character.

Cal. 5-partitus, longitudine corollæ: laciniis 4 superioribus vexillo incumbentibus. *Legumen* turgidum dispermum.

Specific Name and Synonyms.

CICER arietinum. *Hort. Kew. ed alt.* 4. *p.* 317. *Gaertn. sem.* 2. *p.* 328. *t.* 151. *De Cand. fl. fr.* 4. *p.* 600.
CICER *arietinum;* pedunculis unifloris, seminibus globosis gibbis foliolis serratis. *Willd. Sp. Pl.* 3. *p.* 1113. *Schkuhr. handb.* 2. *p.* 368. *t.* 202.
CICER foliolis serratis. *Hort. Cliff.* 370. *Haller Hist. n.* 399. *Blackw. Herb. t.* 557. *Kniph. Cent.* 7. *n.* 11. *Zorn ic. t.* 146.
CICER *arietinum;* foliis impari-pinnatis, foliolis serratis leguminibus dispermis. *Lamarck Encycl.* 2. *p.* 1. *Ejusd. Illustr. t.* 682.
CICER. *Rivin. tetrap. t.* 19. fig. opt. *Tragi Stirp.* 609.
CICER nigrum. *Fuchs stirp. fol. p.* 267. *Cordi Hist. p.* 169. *b.*
CICER sativum. *Bauh. pin.* 347. *Cam. Epit. p.* 204. *Ger. emac.* 1222. *Raj. Hist.* 917.—sive arietinum. *Park. theatr.* 1076. *Matth. comm. p.* 335. *f.* 1.
CICER arietinum. *Dod. pempt.* 525. *Lob. ic.* 2. *p.* 71.

DESCR. *Stem.* herbaceous, annual, branched, hairy: *branches* flexuose. *Leaves* odd-pinnate, alternate: *leaflets* oval, serrate, villous. *Stipules* ovate, eared at the base. *Peduncles* axillary, solitary, one-flowered, jointed in the middle, at which part it is suddenly bent back. *Calyx* 5-cleft: *segments* ovate-acuminate, spreading. *Corolla* papilionaceous, blue-purple, said to be sometimes white:

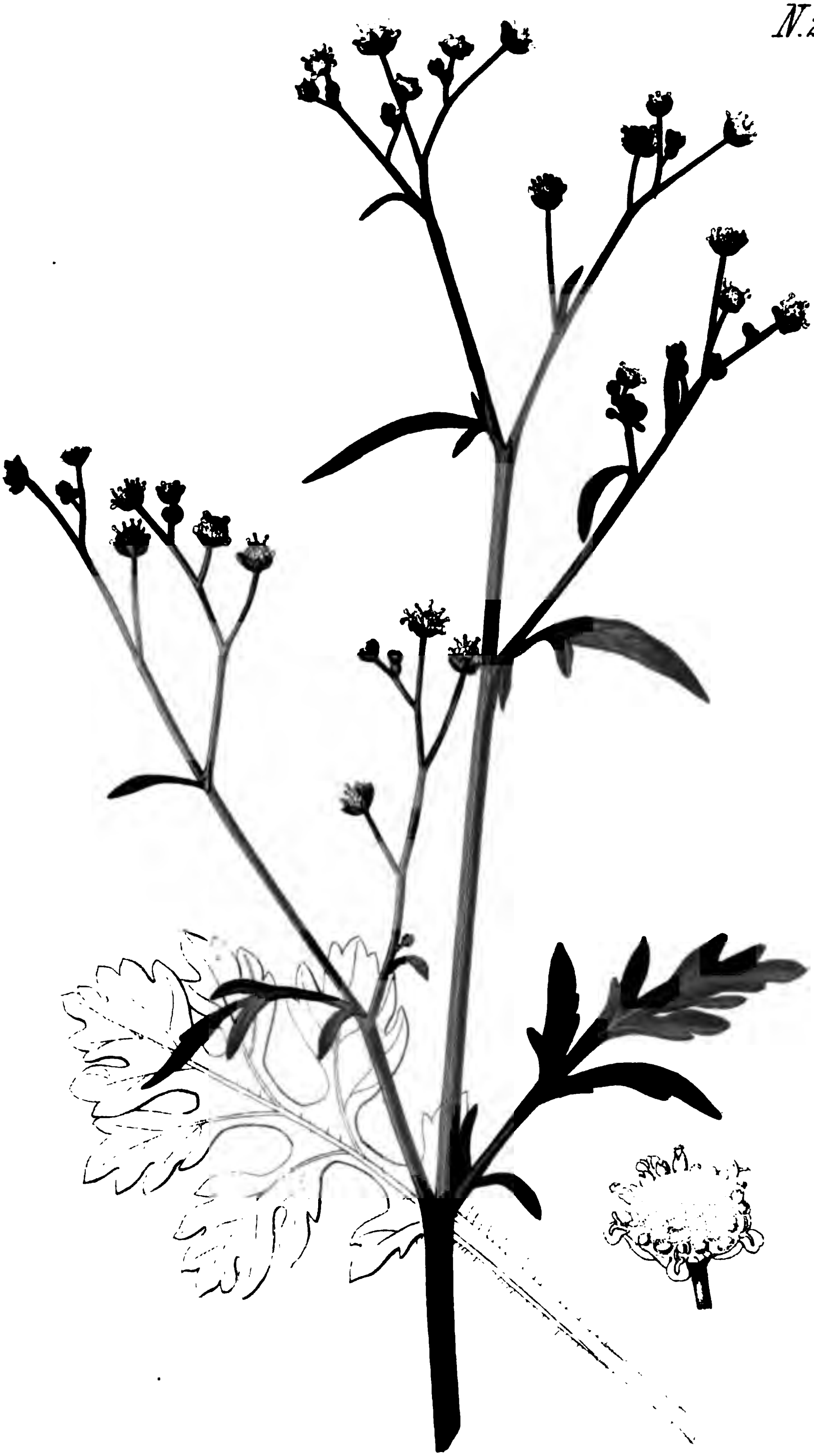
vexillum ovate emarginate, folded inwards so as to conceal both *alæ* and *carina,* which are shorter by half. *Stamens* diadelphous $\frac{9}{1}$. *Germen* very hairy. *Style* filiform: *stigma* capitate, yellow. *Legume* villous, rhomboid, inflated. *Seeds* 2, round, gibbous, not unaptly resembling a ram's head, (especially before it is ripe, for in drying it becomes smoother) whence its trivial name. It is said to vary with black, white, and reddish brown seeds.

This plant is much cultivated in the South of Europe, Africa, and the East Indies, and is supposed to be the most nutritive of any kind of puls. In France it is used roasted as a substitute for Coffee.

It does not appear that there is more than one species of this genus, such plants as have been united with it being better referred to other genera. The English name of *Chick-pea* in both editions of the Hortus Kewensis is a corruption of *Chich-pea.*

Our drawing was made from a plant raised last summer in Mr. Jenkins's Nursery, in the Regent's Park.

N. 2275.



J. Curtis Del. Pub. by J. Curtis Walworth Nov. 1 1821. Weddell Sc.

PARTHENIUM HYSTEROPHORUS. CUT-LEAVED PARTHENIUM.

****

Class and Order.

SYNGENESIA POLYGAMIA NECESSARIA.

Generic Character.

Recept. paleaceum, planum. *Semina* obovata subnuda *Cal.* 5-phyllus.

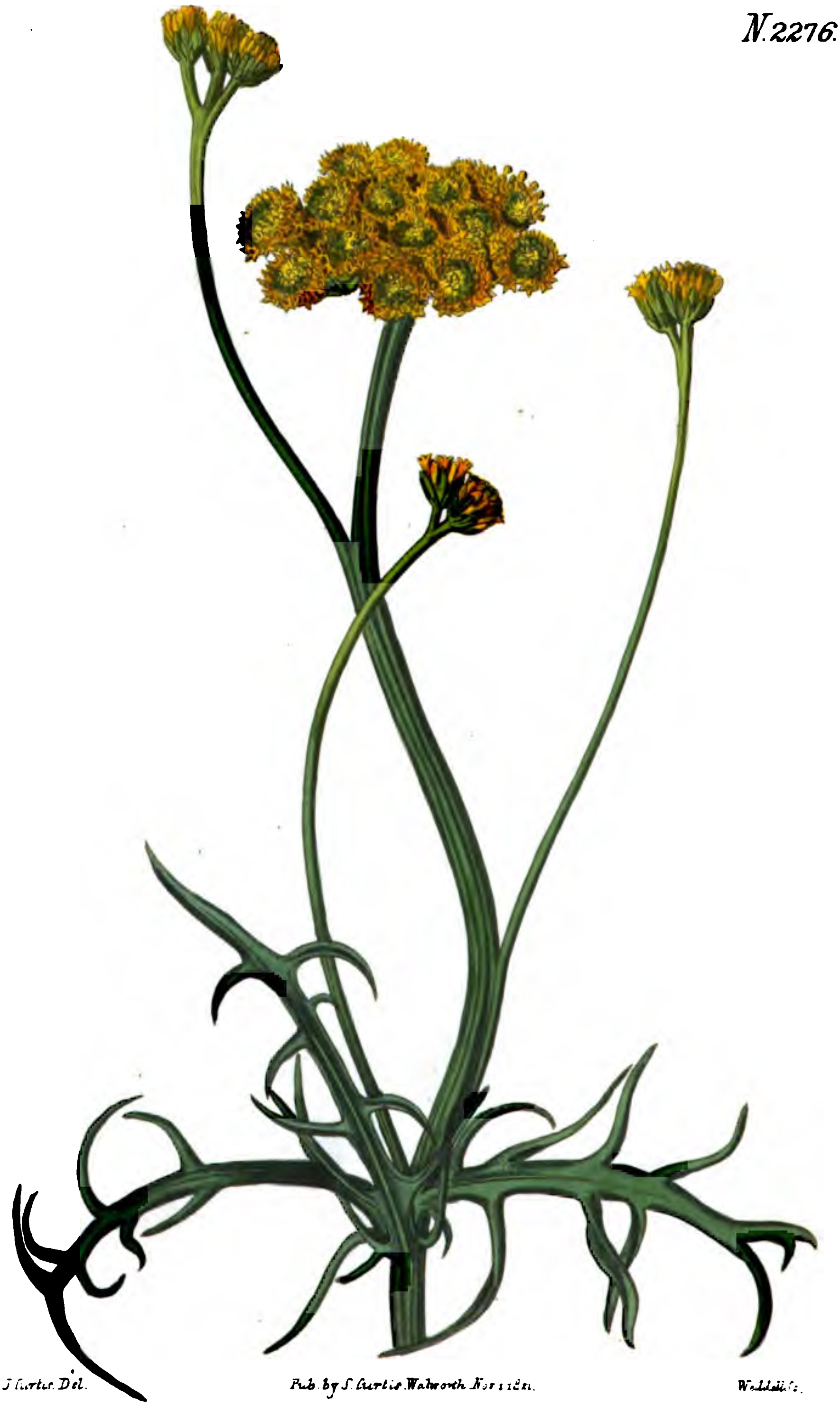
Specific Character and Synonyms.

PARTHENIUM *Hysterophorus;* foliis bipinnatifidis. *Hort. Kew. ed. alt.* 5. *p.* 180. *Willd. Sp. Pl.* 3. *p.* 2385.
PARTHENIUM foliis composito-multifidis. *Hort. Cliff.* 242.
PARTHENIUM subhirsutum ramosum, foliis multipliciter incisis, floribus terminalibus. *Browne Jam. p.* 340.
PARTHENIASTRUM americanum ambrosiæ folio. *Nissole in Mem de l'Acadamie Paris* 1711. *p.* 322. *t.* 13. *f.* 2.
ABSINTHIUM Erysimi folio, Achoavan Alpini quodammodo accedens. *Pluk. Alm.* 3. *t.* 45. *f.* 3.
ARGYROCHÆTA bipinnatifida. *Cavan. Ic.* 4. *p.* 54. *t.* 378.
VILLANOVA bipinnatifida. *Orteg. Dec.* 4. *p.* 48. *t.* 6.

The PARTHENIUM *Hysterophorus,* though cultivated by PHILIP MILLER in 1728, being one of the fifty plants annually delivered to the Royal Society from the Apothecaries' Garden at Chelsea, in pursuance of the will of SIR HANS SLOANE, will probably continue to be rarely met with in our gardens, being scarcely an object of request, except in the general collections of Botanical gardens; and is even in such not very easily preserved, being an annual, and not always maturing its seeds with us.

Native of Jamaica, where it goes by the name of WILD WORMWOOD, and, according to BROWNE, is observed to have much the same qualities as FEVERFEW; also of Martinique and Mexico. Flowers in July and August. Communicated by JOSEPH SABINE, Esq. from the garden of the Horticultural society.

N. 2276.



J. Curtis. Del. Pub. by S. Curtis Walworth Nov 1 1821. Weddell sc.

(2276)

ATHANASIA ANNUA. ANNUAL ATHANASIA.

* *

Class and Order.

SYNGENESIA POLYGAMIA ÆQUALIS.

Generic Character.

Recept. paleaceum. *Pappus* paleaceus, brevissimus. *Cal.* imbricatus.

Specific Character and Synonyms.

Athanasia *annua*; corymbis simplicibus coarctatis, foliis pinnatifidis dentatis. *Hort. Kew. ed. alt.* 4. *p.* 520. *Willd. Sp. Pl.* 3. *p.* 1804. *Schkuhr handb.* 3. *p.* 74. *t.* 239.
Lonas inodora. *Gaertn. sem.* 2. *p.* 396. *t.* 165. *f.* 5.
Elichrysum inodorum, glabrum, Coronopi folio annuum. *Magn. Monsp. p.* 307. *Herm. Lugd. Bat. p.* 228. *t.* 227.
Bellis polyclonos annua africana, coronopi folio, floribus nudis compactis. *Moris. Hist.* 3. *p.* 30.
Santolina africana corymbifera, coronopi folio. *Tourn.* 461.
Ageratum laciniatis foliis inodorum, Africanum. *Raj. Hist.* 364.

For specimens of this plant we are indebted to N. S. Hodson, Esq. of Bury St. Edmunds, through whose zeal for the science of Botany, supported by several Gentlemen in the County, a Botanical garden has been established in that town, which promises to become in a few years of considerable importance, and is already respectable, particularly for the number of herbaceous plants contained in it.

Athanasia *annua*, though not very ornamental from its rambling growth, nor possessed of any sweet scent, has the property of lasting long in flower in so remarkable a degree, that Ray thought it merited its name of Ageratum, signifying in Greek that which is not subject to grow old, better than any other plant with which he was acquainted; the same flowers which expanded in the beginning of July, being still in full vigour at the time he wrote, on the 20th of October.

This quality, as it also lives well in water, renders it rather desirable for mixing with other flowers in vases for adorning rooms, a purpose to which its golden yellow heads, growing on long footstalks, seem well adapted.

Native of Barbary. Cultivated before 1686 by Mr. John Ray, from seeds given him by Sir Hans Sloane. A tolerably hardy annual; but unless brought forward early by a warm situation or artificial heat, will in most seasons fail of producing ripe seeds.

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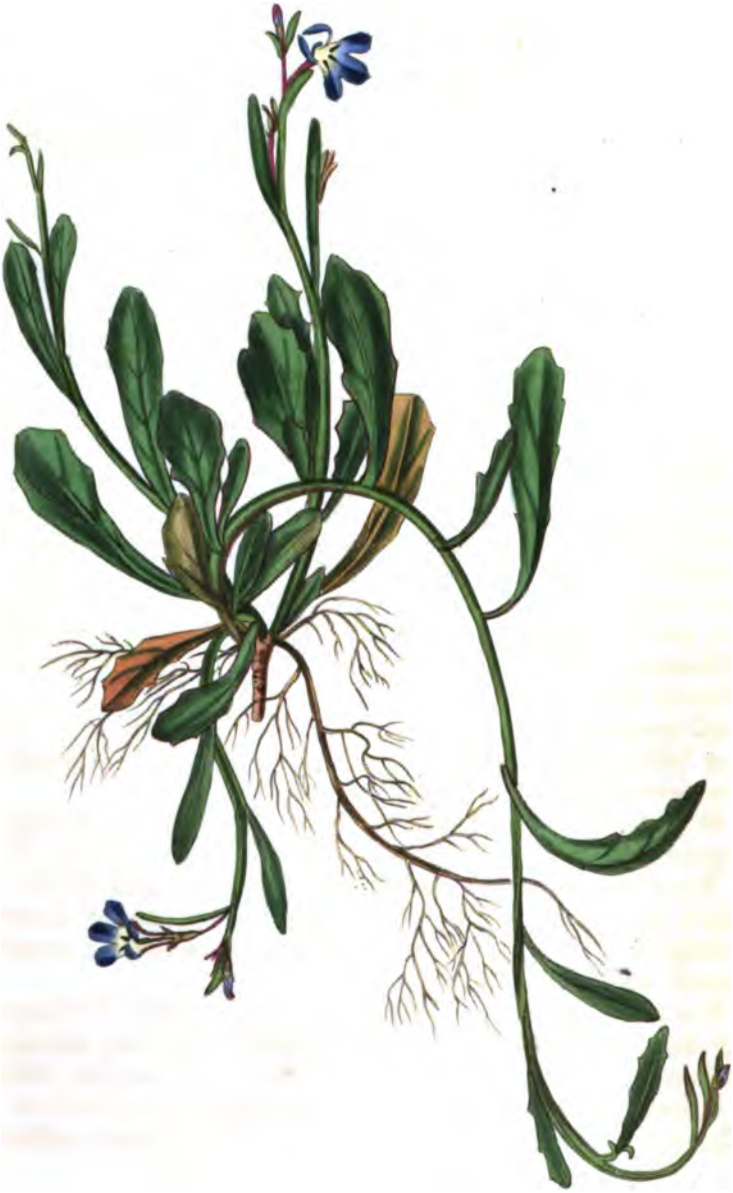

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LOBELIA DECUMBENS. DECUMBENT LOBELIA.

****

Class and Order.

PENTANDRIA MONOGYNIA.

Generic Character.

Calyx 4-fidus. *Cor.* petala irregularis. *Antheræ* cohærentes. *Caps.* infera 2— s. 3-locularis.

Specific Character.

LOBELIA *decumbens;* caulibus decumbentibus, foliis obovatis dentatis pedunculis axillaribus solitariis bractea lineari-lanceolata integerrima brovioribus.

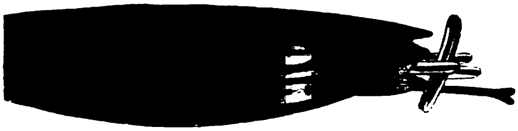
DESCR. *Root* perennial, creeping. *Radical leaves* on young plants petioled, round-obovate, subcrenate, dentate; *cauline leaves* similar, but longer, more deeply notched, and subsessile; the floral leaves or *bractes* are linear-lanceolate, obtuse, quite entire, decurrent, making the stem at this part angular, though elsewhere these are rounded. *Peduncles* axillary, solitary, shorter than the floral leaf. *Flowers* blue, smaller than *in bicolor* (No. 525) the two small laciniæ of the upper lip distant and incurved. *Germen* bilocular. *Calycine teeth* short, subulate, spreading. The whole plant is smooth.

We were favoured with a pot of this plant in flower in August last, from our kind contributor N. S. HODSON, Esq. of Bury St. Edmunds, under the name of *bellidifolia,* by which it is generally known in the gardens; but LOBELIA *bellidifolia* has upright hairy stems, and flowers in a terminal panicle on long peduncles.

We cannot satisfy ourselves that our plant belongs to any described species. It may possibly be the *anceps* of THUNBERG; but cannot well be that of LINNÆUS, which, as appears from an archetype specimen preserved in the Banksian Herbarium, was taken up from a plant collected in Ceylon by Konig, and is both erect and annual. W are informed by Mr. Anderson that our plant is certainl a native of the Cape of Good Hope. Otherwise we shoul have entertained some doubt whether it might not be variety of the *alata* of Labillardiere and Brown, which i stated by the latter to be a very polymorphus species.

An herbaceous perennial, easily propagated by its creeping roots. Requires to be protected from frost by greenhouse or pit.

N. 2278.



Weddell sc.

HIPPEASTRUM STYLOSUM. LONG-STYLED KNIGHT'S-STAR LILY.

Class and Order.

HEXANDRIA MONOGYNIA.

Generic Character. Vide supra No. 2273.

Specific Character and Synonyms.

HIPPEASTRUM *stylosum,* foliis suberectis nitidis basi purpurascente, scapo subtripedali, tubo brevi viridescente cernuo, fauce fimbriatâ, limbo reflexè-infundibuliformi, colore inter fulvum et carneum, laciniis exteris latioribus, filamentis plùs semunciâ, stylo plùs unciâ limbo longioribus, stigmate breviter et rotundatè trilobato.
HIPPEASTRUM equestre *var.* glabrifolia. *Nobis in appendice.*
HIPPEASTRUM stylosum. *Ib. in postscripto.* W. H.

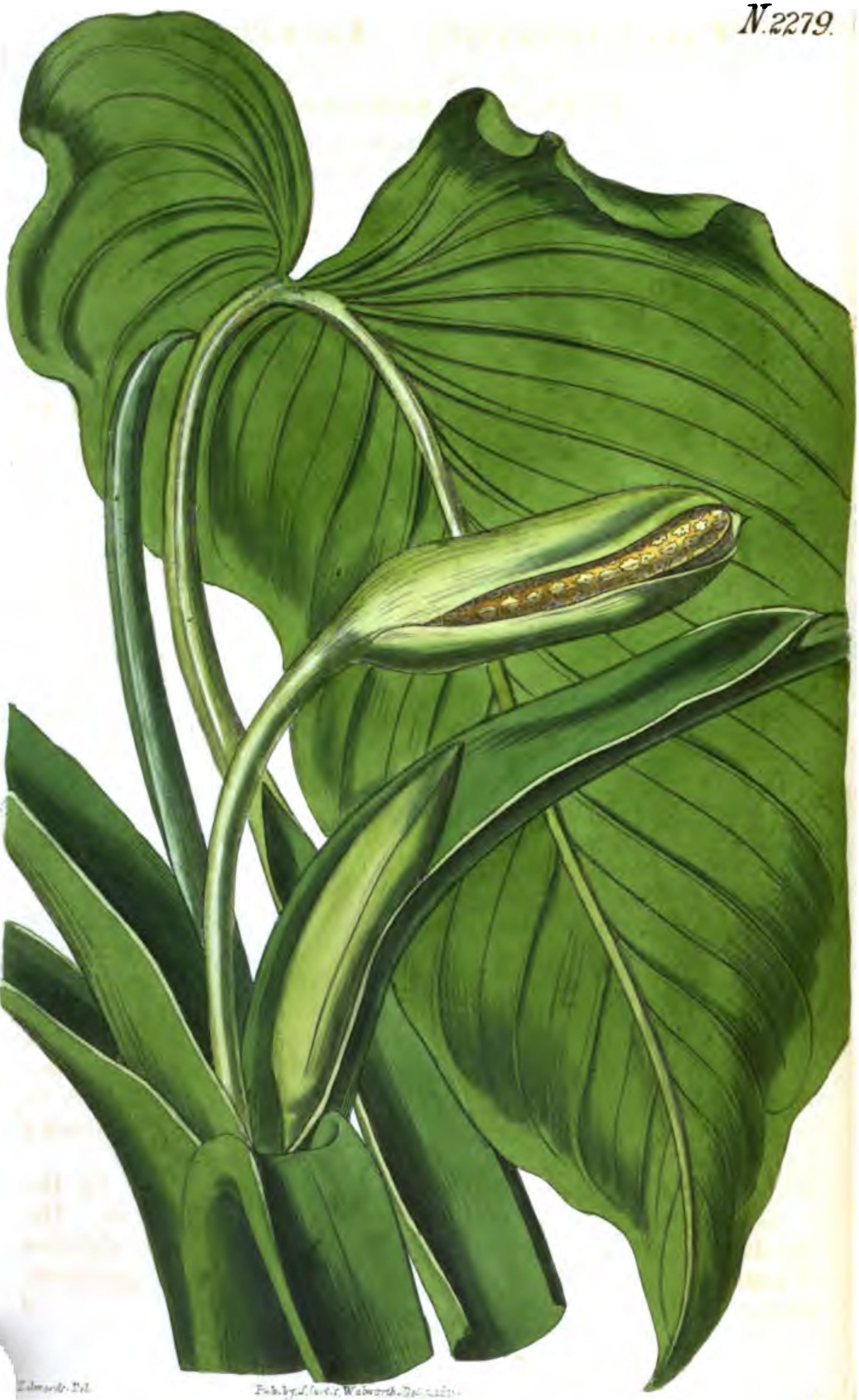
DESCR. *Bulb* a little flattened like that of *equestre. Leaves* like *equestre,* but more glossy, and purple at their base. *Tube* and *limb* in form and posture much like *Reginæ,* but considerably smaller. *Beard* like that of *Reginæ,* in greenish white tufts between the base of the petals. *Star* green, very short, not spread into broad rays as in *equestre,* or prolonged into white stripes as in *Reginæ. Limb* pale fulvous pink, veined and speckled with a deeper colour. *Anthers* straw-coloured, striped with red. *Pollen* bright yellow. *Filaments* five-eighths, *Style* an inch and a quarter longer than the corolla. *Stigma* consisting of three short round lobes.

Bulbs of this unrecorded species were received last year by Lord Carnarvon from Maranham in Brazil, and since by Mr. BROOKES, from Cayenne, and by Mr. LEE, from Brazil. It was at first marked in the appendix as a variety of *equestre,* which it resembles in the bulb and in the form and posture of its leaves. It is distinguished from that species by the different form and posture of the tube and limb, the absence of the broad-rayed star, and the style being an inch and a quarter longer, instead of an inch and a quarter, or at least an inch shorter than the corolla, as well as the length of the filaments. It differs from *Reginæ* in bulb, leaf, star, and the length of the style and filaments, as well as the colour of the petals, which is not exactly like that of any known species. Mr. Lee was struck with the resemblance of the flower to Hemerocallis *fulva*, but the colour inclines more to flesh colour, and the great length of the filaments and style appear to furnish the best distinguishing feature. A name founded on its resemblance to Hemerocallis would have been inconveniently long. This species, though very inferior to *equestre* in beauty, appears to thrive more freely. *W. H.*

CORRIGENDUM.

Pag. 2272. lin. 1. et 10. pro MICROCANTHA lege MACROCANTHA.

N.2279.



Edwards Del.

Pub. by S. Curtis, Walworth, Dec. 1. 1821.

CALLA AROMATICA. AROMATIC CALLA.

* * *

Class and Order.

MONŒCIA MONANDRIA. *Schreber.*

HEPTANDRIA MONOGYNIA. *Willd.*

Generic Character.

Spatha plana. *Spadix* tectus flosculis. *Cal.* 0. *Cor.* 0. *Bacca* polysperma.

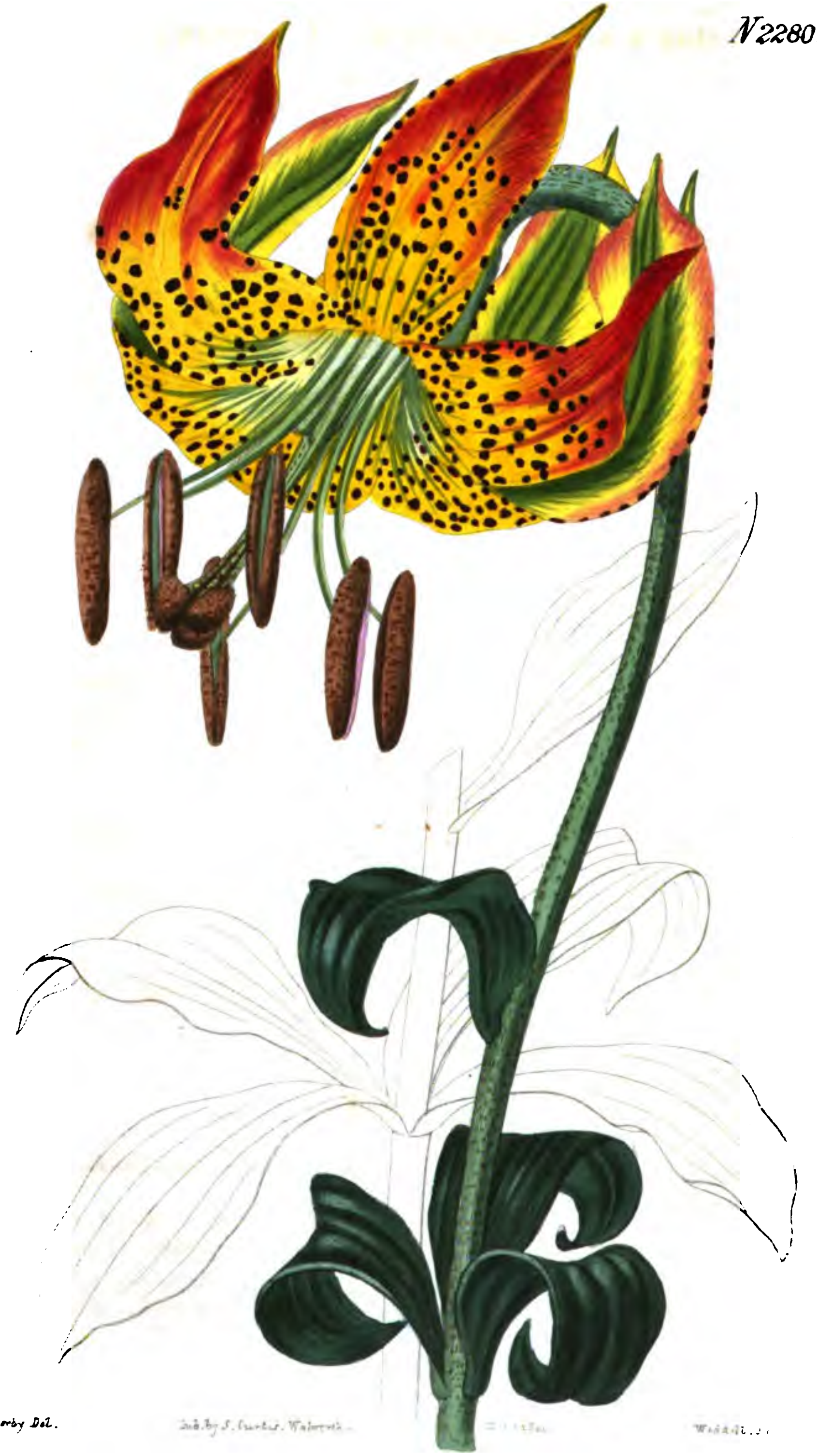
Specific Character and Synonyms.

CALLA *aromatica;* caulescens, subsagittato-cordatis acuminatis: lobis rotundatis divaricatis, spatha cymbæformi spadicem basi femineum suboccultante.
CALLA aromatica. *Roxb. Fl. Ind. orient.* nondum edita.
CALLA occulta. *Lodd. Cab.* 12. vix Loureiri.
DRACUNCULUS amboinicus. *Rumph. Amb.* 5. *p.* 322. *t.* 111. *f.* 2?

Our drawing was taken in July 1813, from a plant that flowered at that time in Sir ABRAHAM HUME's stove at Wormleybury; Messrs. LODDIGES and SONS also raised it about the same time from seeds, sent by Dr. ROXBURGH under the name of CALLA *aromatica;* but finding very little scent in the flowers, and conceiving it to answer to LOUREIRO's description of CALLA *occulta* they adopted that name. But as it does not altogether accord with the characters given in the Flora cochinchinensis, and it is likely to be published under the name of *aromatica* in ROXBURGH's Flora, we prefer the latter appellation.

About two thirds of the spadix were occupied by the stamens, and one third at the base with the pistils. Dr. ROXBURGH states that these pistils are mixed with abortive stamens; of which we could observe none in our specimen,

N 2280.



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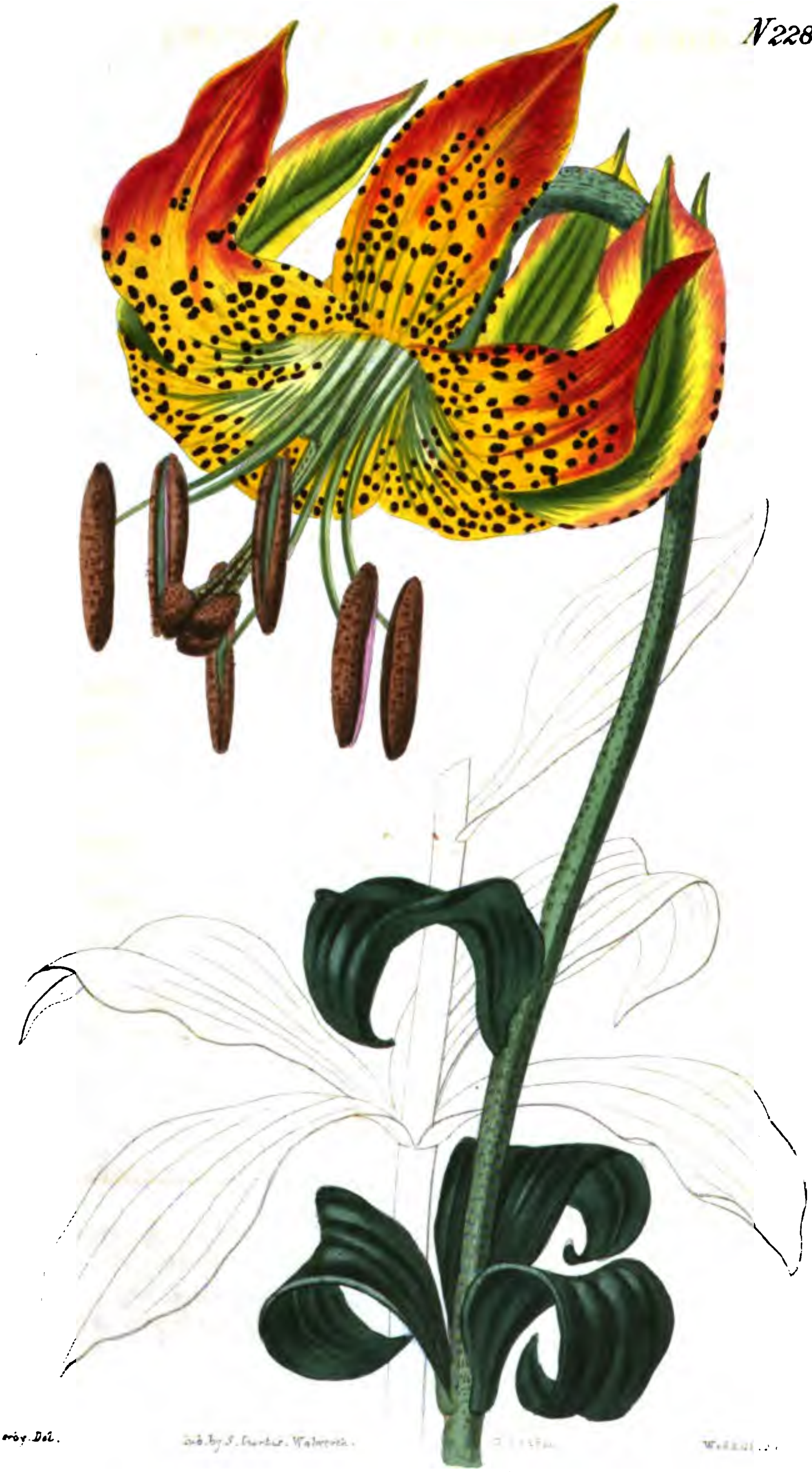

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LILIUM CAROLINIANUM. CAROLINA MARTAGON LILY.

****

Class and Order.

HEXANDRIA MONOGYNIA.

Generic Character.

Cor. 6-petala, campanulata: linea longitudinali nectarifera. *Caps.* valvulis pilo cancellato connexis.

Specific Character and Synonyms.

LILIUM *carolinianum;* caule subunifloro, foliis verticillatis sparsisque carnosis recurvis, petalis revolutis apice compressis.

LILIUM *carolinianum;* glaberrimum, foliis enerviis plerumque verticillatis, late subcuneato-lanceolatis sive obovalibus, ramis floriferis crassis ternato-terminalibus (rarius binis aut unico) calycibus valde reflexis maculosis. *Michaux Flor. Bor. Am.* 1. *p.* 197. *Bot. Reg.* 580.

LILIUM *carolinianum*; foliis plerumque verticillatis cuneato-lanceolatis s. obovalibus enervibus glaberrimis, ramis floriferis crassis ternato-terminalibus, floribus reflexis, corollis revolutis. *Pursh. Flor. Am. Sept.* 1. *p.* 229.

LILIUM carolinianum. *Nuttall. Gen.* 1. *p.* 222. *Persoon Syn.* 1. *p.* 359. non Lamarckii.

LILIUM *Martagon;* foliis plerumque verticillatis quaternis, caule pedali, floribus plerumque solitariis reflexis, corollis revolutis. *Walter Fl. Carol. p.* 123.

LILIUM Michauxii. *Poiret. Suppl. Encycl.* 3. *p.* 457.

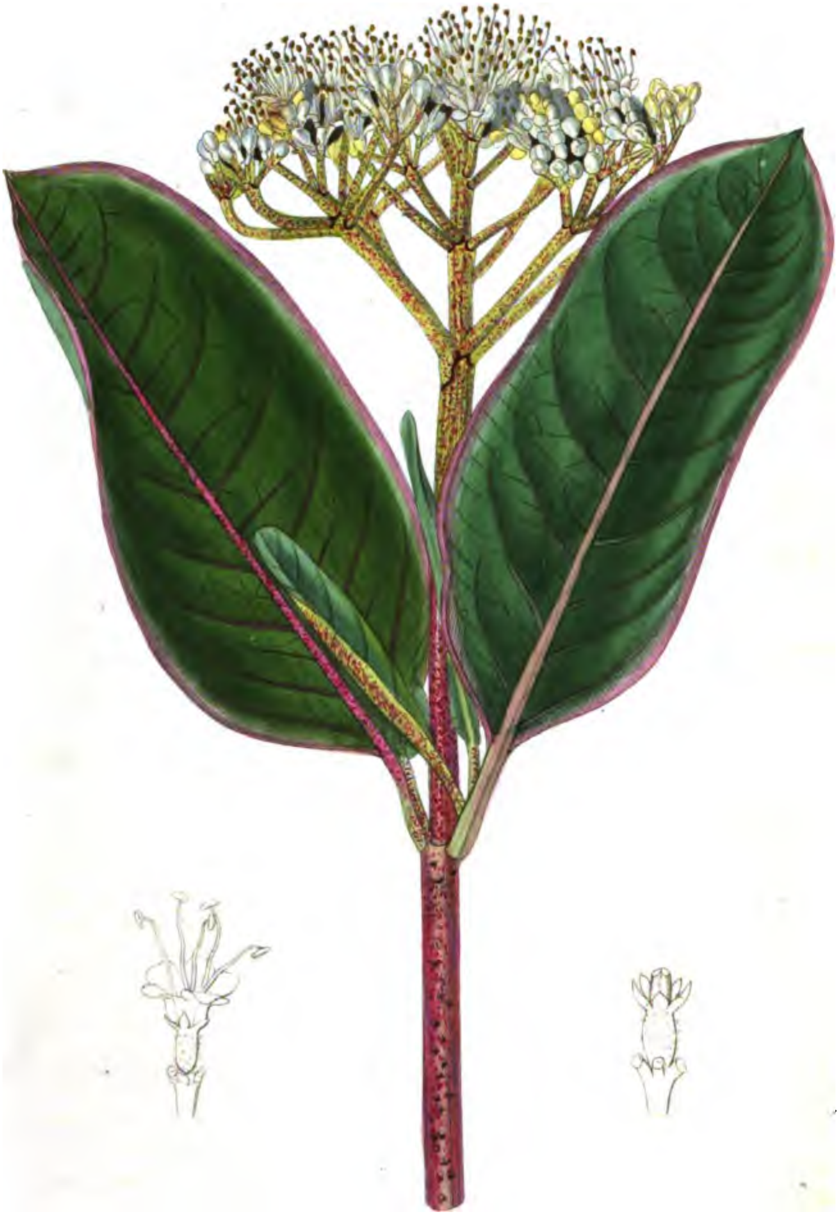
LILIUM autumnale. *Lodd. Cab.* 335.

DESCR. *Stem* about a foot high, simple, upright, spotted. *Leaves* some in whorls and some scattered, fleshy, rigid, ovate-lanceolate, recurved, undulate, obscurely three-nerved. *Peduncle* in the one flowered specimens, and we have seen no other, continuous with the stem and the same size till it approaches the flower, when it is much thickened and bent. *Flower* nodding; *petals* revolute, on the inside yellow spotted with black, deep orange toward the points, which are always pressed inwards as if squeezed betwixt the thumb and finger: on the outside green, tinged with yellow; the nerve deeply channelled. *Filaments* green, acute: *anthers* versatile, oblong-oval, purplish brown: *pollen* red-orange. *Style* longer than stamens, purple, streaked at the upper part: *stigma* very large, three-lobed, brown-purple.

Authors seem to have been very doubtful whether this species was distinct from LILIUM *superbum*, and it is not improbable that dwarf few-flowered specimens of the latter, have been confounded with this. Mr. NUTTALL, a real observer, never himself saw it more than one-flowered; but says that he has been well assured that in cultivation it produces many flowers on the stem in proliferous stages, and that it then apparently becomes LILIUM *superbum*. We are quite of opinion that when this has been the case, a single flowered variety of the latter species has been mistaken for this. Our plant has not in our gardens shewn a disposition to assume the habit of *superbum* in any respect.

Native of Carolina and Florida. Flowers in September and October, and according to M. LODDIDGES should have the protection of a frame in winter, at which time the stem dies down. The proper soil they state to be loam and peat. Communicated by Messrs. WHITLEY, BRAME and MILNE, who inform us, that they bought it of Messrs FRASER, by whom it was probably first introduced into this country.

N.2281.



J. Curtis Del. Pub by S. Curtis Walworth Dec. 1. 1821. Weddell sc.

VIBURNUM NUDUM. OVAL-LEAVED VIBURNUM.

****

Class and Order.

PENTANDRIA TRIGYNIA.

Generic Character.

Cal. 5-partitus, superus. *Cor.* 5-fida. *Bacca* 1-sperma.

Specific Character and Synonyms.

VIBURNUM *nudum;* foliis oblongo-ovalibus subintegerrimis margine revolutis in petiolum decurrentibus, cymis ebracteatis.

VIBURNUM *nudum;* foliis ovalibus subrugosis margine revolutis obsolete crenulatis. *Hort. Kew. ed.* 1. *p.* 370. *ed. alt.* 2. *p.* 167. *Willd. Sp. Pl.* 1. *p.* 1487. *Pers. Syn.* 1. *p.* 326.

VIBURNUM *nudum;* foliis integerrimis lanceolato-ovatis. *Sp. Pl.* 383. *Mill. ic.* 2. *p.* 183. *t.* 274.

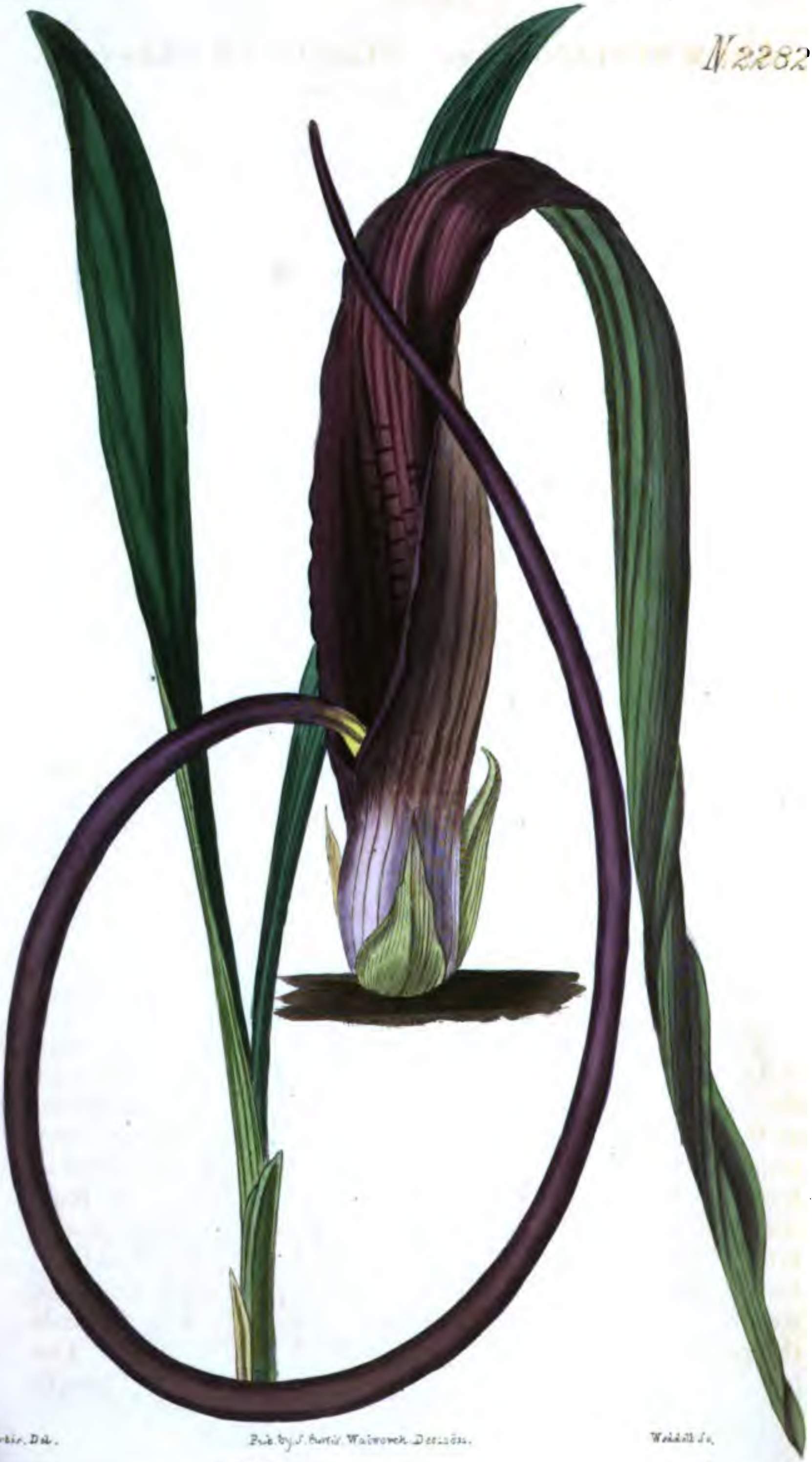
VIBURNUM *nudum;* glaberrimum, foliis ovalibus vel ovali-lanceolatis, margine revoluto-integris; cymis ebracteatis pedunculatis. *Michaux Fl. Bor. Am.* 1. *p.* 178.

TINUS foliis ovatis in petiolos terminatis integerrimis. *Gron. Fl. virg. ed.* 1. *p.* 33. *ed.* 2. *p.* 46. (Viburnum.)

This species very much resembles VIBURNUM *Tinus,* but is a taller growing shrub; the leaves are rolled back at the margin, and sometimes obsoletely crenate; they are also decurrent on the footstalk. The flowering cymes are altogether without bractes, which in *Tinus* are furnished at the base with very small subulate ones; generally equalling in number the first branches, and forming an involucrum, but so small that it is hardly conspicuous in dried specimens. In the species Plantarum of LINNÆUS, VIBURNUM *Tinus* and *nudum* follow in succession, and the above observation is subjoined to the latter in reference to the *preceding* species; but in WILLDENOW's edition it is negligently applied to *scandens,* that species, from the arrangement there made, becoming the preceding one.

Native of Virginia and Carolina, hardy. Flowers in the summer months. Propagated by cuttings. Communicated by JOHN WALKER, Esq. of Arno's Grove.

N 2282.



Curtis, Del. Pub. by S. Curtis, Walworth, Dec. 1. 1821. Weddell Sc.

ARUM TENUIFOLIUM. SCORZONERA-LEAVED ARUM.

****

Class and Order.

MONŒCIA MONANDRIA. *Schreber.*

MONŒCIA POLYANDRIA. *Willd.*

Generic Character.

Spatha monophylla, cucullata. *Spadix* supra nudus, inferne femineus, medio stamineus.

Specific Character and Synonyms.

ARUM *tenuifolium;* acaule, foliis angusto-lanceolatis, spatha subrecurva, spadice longo vermiformi acuto declinato. *Lamarck Encycl.* 3. *p.* 10. *n.* 10. *Bot. Reg.* 512.

ARUM *tenuifolium;* foliis lineari-lanceolatis, spadice subulato spatha lanceolata longiore. *Willd. Sp. Pl.* 4. *p.* 486. *Hort. Kew. ed. alt.* 5. *p.* 309.

ARUM *tenuifolium;* acaule, foliis lanceolatis, spadice setaceo declinato. *Sp. Pl.* 1370. Excluso ubique synonymo Gronovii.

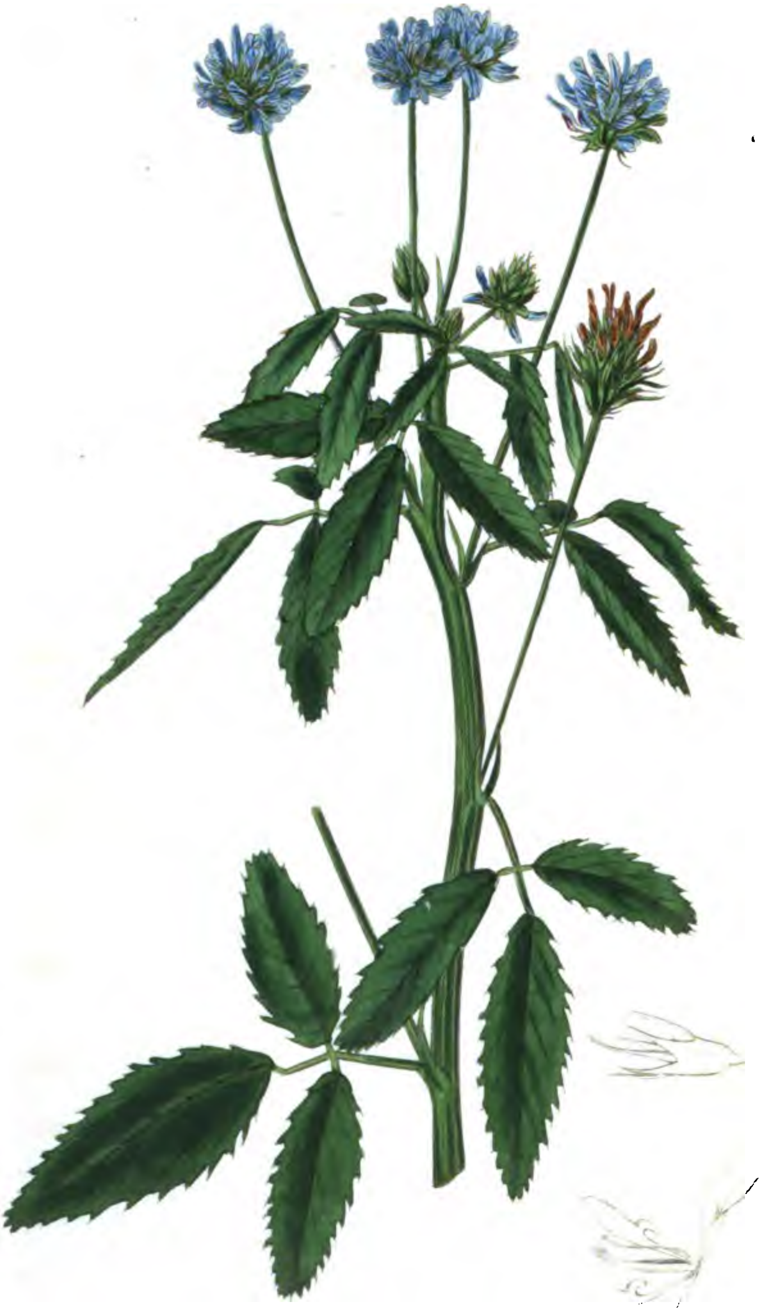
ARISARUM angustifolium. *Bauh. Pin.* 196. *Clus. Hist.* 2. *p.* 74.—*Hisp. p.* 304. *f.* 305. *Lob. Advers.* 261. *Lob. ic.* 599. *Dod. Pempt.* 332.

This very curious species of ARUM blossoms in June and July, but the leaves do not appear till after the flowers decay. The *spathe* in our plant was very much lengthened at the point; was at first moderately, but afterwards very much, recurved and spirally twisted, extending ten inches in length; externally green, striate; internally of a dark sordid purple colour, curiously chequered; margin undulated. The *spadix* at first more inclined to blood-colour, but finally of the same sordid purple, protruded from the spathe to the extent of fifteen inches, tapering towards the point, and aptly enough compared to a worm. The length of this part obliged the draughtsman to curl it upwards to make it come within the plate. The base of the spadix contained the female flowers; above which were white sterile filaments or cirrhi; above these the sessile, bilabiate, anthers with yellow pollen; and above these again more cirrhi; all concealed within the spathe. Soon after the flower decayed the leaves appeared.

In CLUSIUS's time this plant was cultivated in the Dutch gardens, and LOBEL says in the English also; but the latter author never saw it in blossom.

The plant from which our drawing was taken, was communicated by our kind contributor JOHN WALKER, Esq.

N. 2283.



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TRIFOLIUM CŒRULEUM. BLUE MELILOT-TREFOIL.

Class and Order.

DIADELPHIA DECANDRIA.

Generic Character.

Flores subcapitati. *Legumen* vix calyce longius, non dehiscens, deciduum.

Specific Character and Synonyms.

* MELILOTI, *leguminibus nudis polyspermis, floribus racemosis.*

TRIFOLIUM *cœruleum ;* racemis ovatis, leguminibus seminudis mucronatis, caule erecto.

TRIFOLIUM *Melilotus cœrulea;* spicis oblongis, leguminibus seminudis mucronatis, caule erecto. *Sp. Pl.* 1077. *Kniph. Cent.* 5. *n.* 92. *Krock. Siles.* 2. *p.* 215.

TRIFOLIUM *cœruleum ;* racemis oblongis pedunculatis, leguminibus ventricosis seminudis dispermis mucronatis, caule erecto, stipulis lanceolatis membranaceis. *Willd. Sp. Pl.* 3. *p.* 1352. *Hort. Kew. ed. alt.* 4. *p.* 378.

MELILOTUS *cœrulea ;* racemis ovatis spiciformibus, leguminibus mucronatis, caule erecto. *Lam. Encycl.* 4. *p.* 62.

MELILOTUS major odorata violacea. *Moris. Hist.* 2. *p.* 162. *s.* 2. *t.* 16. *f.* 10.

MELILOTUS cœrulea. *Riv. tetr.* 9.

TRIFOLIUM odoratum alterum sive Lotus sativa. *Dod. Pempt.* 571.

TRIFOLIUM odoratum. *Fuchs. Hist. t.* 815. *Park. Theatr.* 716. *Ger. emac.* 1195.

LOTUS hortensis odora. *Bauh. Pin.* 331. *Lob. ic.* 2. *p.* 41. *f.* 1.

LOTUS sylvestris. *Cam. Epit.* 894.

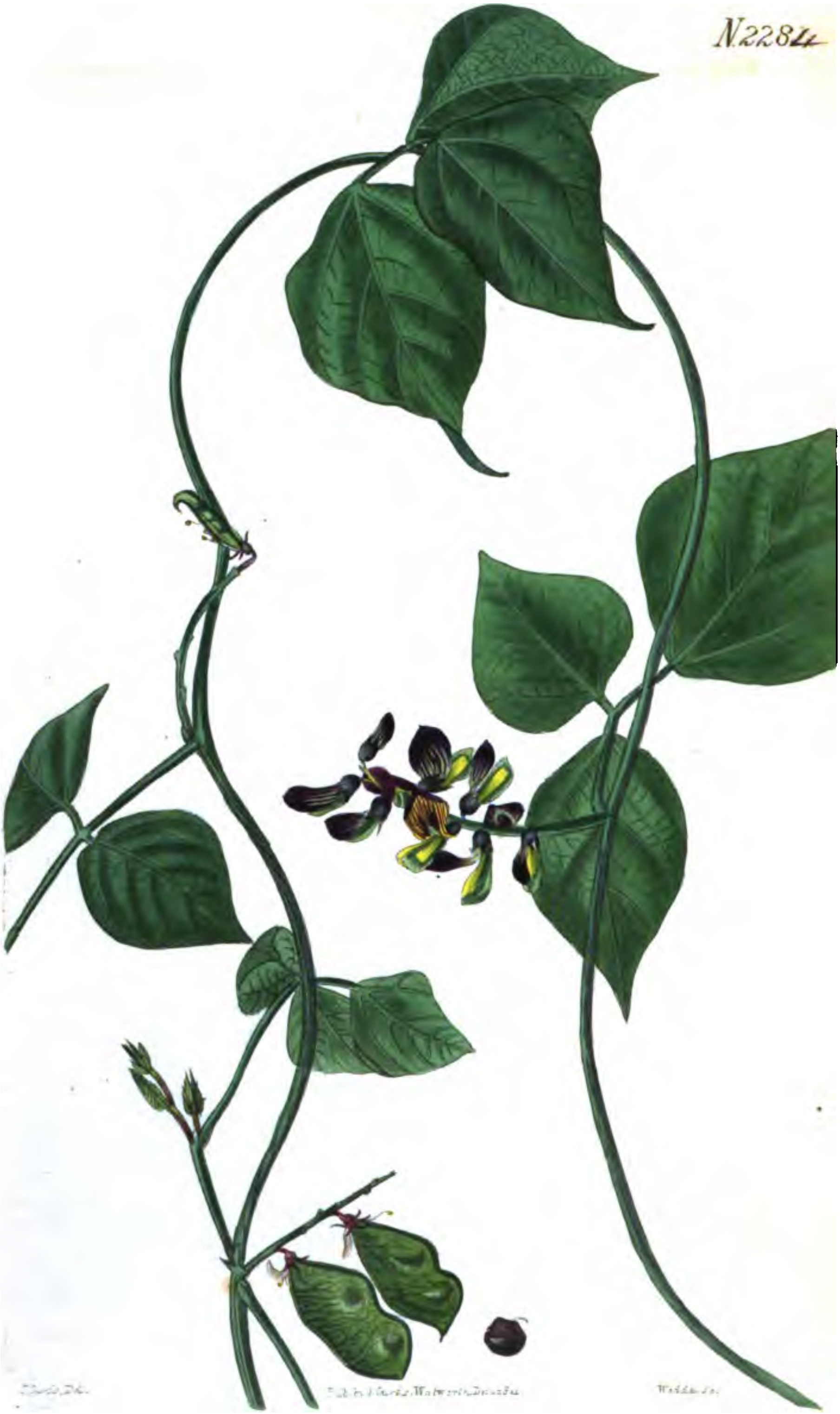
LOTUS urbana. *Blackw. Herb.* 284.

Descr. *Root* annual. *Stem* erect, grooved, smooth. *Stipules* 2, subulate-lanceolate, sometimes semisagittate, and one of them frequently bifid at the point. *Petioles* channelled, shorter than the leaf. *Leaflets* elliptical, serrate, with mucronate serratures; slightly villous underneath and ribbed with parallel veins; terminal one on a longer pedicle. *Peduncles* axillary, erect, twice the length of the leaf. *Flowers* pale blue in round-ovate heads. *Calycine* segments subulate, the two upper ones shorter than the rest. *Vexillum* oblong, emarginate, folded so as to inclose the *alæ* and monopetalous *carina*. *Legume* smooth, gibbous, somewhat inflated, longer than the tube of the calyx, generally two-seeded, mucronate by the persistent lengthened style.

The whole of this plant, but more especially the flowering heads and seeds, possess a powerful scent of Fœnugreek; an odour grateful to many, but to some persons extremely disagreeable. It was formerly cultivated in gardens in most parts of Europe for the sake of its scent, and was frequently laid in wardrobes to drive away moths. Caspar Bauhin in his Pinax, mentions the use of this plant made by the Swiss to flavour the "Schabzugar cheese;" a subject upon which we received from our friend Mr. John Walker the following observations, together with the specimen from which our drawing was made. "The cultivation of the Trifolium *cœruleum* is, I believe, limited to the canton of Glaris for the purpose of flavouring the Schabzigher cheese, a word differently written even by Germans themselves, from the various opinions regarding its etymology. Those who write it Schapzieger derive it from Schaf, a sheep, and Ziege, a goat, stating at the same time that the cheese is made with sheep and goat's milk in equal quantities. This notion is however erroneous, as the cheese is made altogether from skimmed cows milk. A poor cheese, thus made, in the patois of the country is called Zigher, and that word combined with the verb Schaben to grate or scrape, affords a very satisfactory derivation, and proves that Schabzigher is the correct orthography. The clover is cut just before flowering; the leaves only are used, which are dried, pulverized, sifted, and mixed with the cheese, which is afterwards pressed into wooden moulds. It is principally exported to Russia and Holland."

A hardy annual. Native of Germany. Cultivated by Dr. Wm. Turner before 1562. Flowers in August and September.

N. 2284



J. Curtis Del. Pub. by S. Curtis, Walworth, Dec. 1. 1821. Weddell sc.

GLYCINE PHASEOLOIDES. LESSER RED-BEAD GLYCINE.

****

Class and Order.

DIADELPHIA DECANDRIA.

Generic Character.

Cal. 2-labiatus. *Corollæ* carina apice vexillum reflectens.

Specific Character and Synonyms.

GLYCINE *phaseoloides;* frutescens, foliis ternatis villosis, racemis axillaribus, leguminibus tomentosis compressis medio coarctatis dispermis.

GLYCINE *phaseoloides;* foliis ternatis subtus villosis racemis terminalibus. *Swartz Prodr. p.* 105.—*Flor. Ind. Occ.* 1248. *Willd. Sp. Pl.* 3. *p.* 1060.

GLYCINE sylvestre scandens, foliis pinnato-ternatis, floribus spicatis, siliquis bispermibus medio coarctatis. *Brown Jam.* 298, 2.

PHASEOLUS florum spica pyramidata, semine coccineo nigra macula notato. *Plum. Cat.* 12?

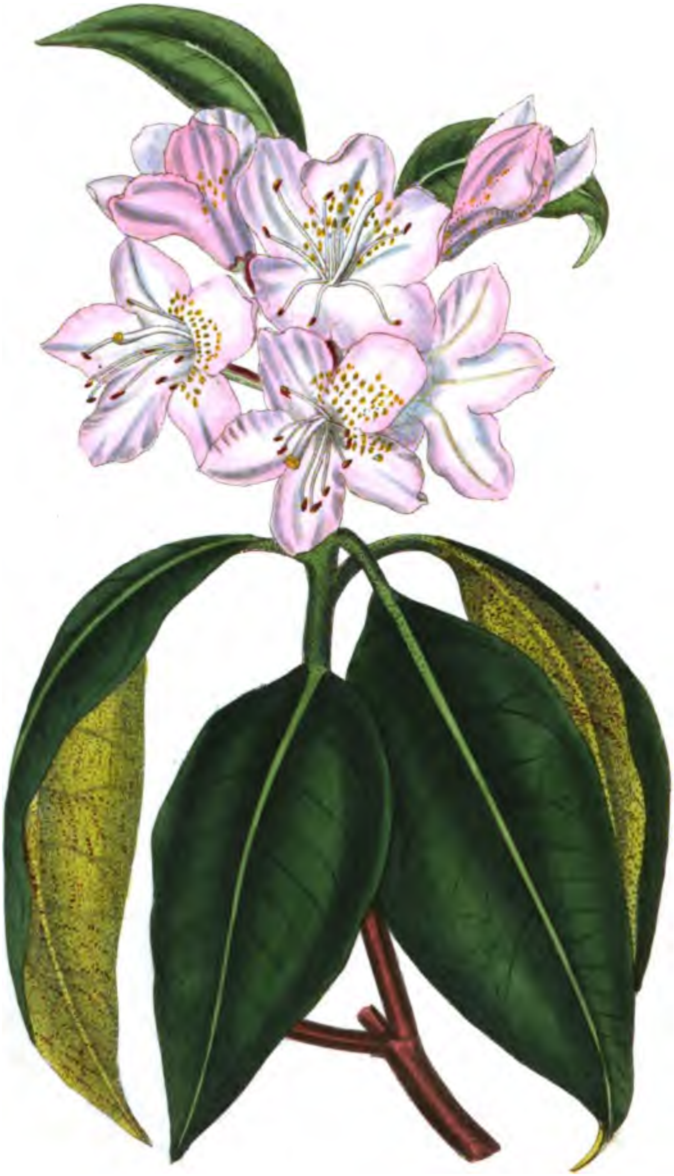
DOLICHOS *pyramidalis;* volubilis, racemis pyramidalibus longissimis, leguminibus brevibus dispermis subquinquagenis, seminibus subrotundis. *Lam. Encycl.* 2. *p.* 296?

DESCR. *Stem* twining, villous. *Leaves* ternate, clothed with a soft pubescence on both sides. *Leaflets* ovate-acuminate, somewhat rhomb-shaped; the terminal one on a longer footstalk than the lateral. *Stipules* lanceolate, falling off before the flowers appear. *Racemes* of flowers from two to five inches long. *Calyx* bilabiate, purplish brown, persistent: *upper-lip* emarginate: *lower-lip* three toothed: teeth acute, the middle one the longest. *Corolla* papilionaceous: *vexillum* oval, brown-purple, streaked with yellow on the inside and green at the base: *alæ* very narrow, curved, green: *carina* the size of the vexillum, green, monopetalous. *Stamens* diadelphous $\frac{1}{9}$. *Germen* linear: *Style* filiform, the length of the stamens. *Legumen* oblong-oval, obliquely mucronate, compressed, contracted in the middle, villous, net-veined, two seeded. *Seeds* nearly round, bright scarlet, with a black spot extending over nearly half the seed; *Hilum* large and open.

It is probable that Plumier's plant the Dolichos *pyramidalis* of Lamarck is not the same species with the present subject, being described as having racemes of flowers a foot and half in length; Swartz describes them as four or five inches long, in other respects his description coincides nearly with our own. M. Poiret considers the second figure of the genus Abrus in Lamarck's illustrations as belonging to Glycine *phaseoloides;* and there is little doubt but that it must at least be a congener of it.

For this very rare climbing shrub, native of the West Indies, not mentioned in any of our catalogues of plants cultivated in this country, we are indebted to John Walker, Esq. of Arno's Grove, Southgate, who thinks he received it, when a seedling, from the Hon. and Rev. Wm. Herbert. Requires to be kept in the stove. Flowers in June and July.

N.2285.



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RHODODENDRON PUNCTATUM. (α.) CAROLINA DOTTED-LEAVED RHODODENDRON.

****

Class and Order.

DECANDRIA MONOGYNIA.

Generic Character.

Cal. 5-partitus. *Cor.* sub-infundibuliformis. *Stamina* declinata. *Caps.* 5-locularis.

Specific Character and Synonyms.

RHODODENDRON *punctatum;* foliis oblongis glabris subtus resinoso-punctatis, umbellis terminalibus, corollis infundibuliformibus. *Willd. Sp. Pl.* 2. *p.* 607. *Hort. Kew. ed. alt.* 3. *p.* 51. *Bot. Repos.* 36. *Venten. Cels.* 15.

RHODODENDRON *minus;* foliis ovali-lanceolatis utrinque sensim acutis subtus ferrugineo-punctatis; floribus brevissime pedicellatis infundibulo-campanulatis, capsulis elongatis. *Michaux Fl. Bor. Am.* 1. *p.* 258. *Persoon Syn.* 1. *p.* 478.

RHODODENDRON *punctatum;* foliis ovali-lanceolatis glabris subtus resinoso-punctatis, umbellis terminalibus, corollis infundibuliformibus, capsulis elongatis. *Elliott Flor. Carol.* 1. *p.* 434.

RHODODENDRON *punctatum;* foliis ovali-lanceolatis utrinque acutis glabris subtus ferrugineis resinoso-punctatis, umbellis terminalibus, pedicellis brevibus, dentibus calycis brevissimis, corollis infundibuliformibus: laciniis ovatis subundulatis, capsulis elongatis. *Pursh Flor. Am. Sept.* 1. *p.* 298.

RHODODENDRON punctatum; foliis glabris subtus punctatis, viminibus laxis, corollis crispis violaceo-purpureis. *Bot. Repos.* 36.

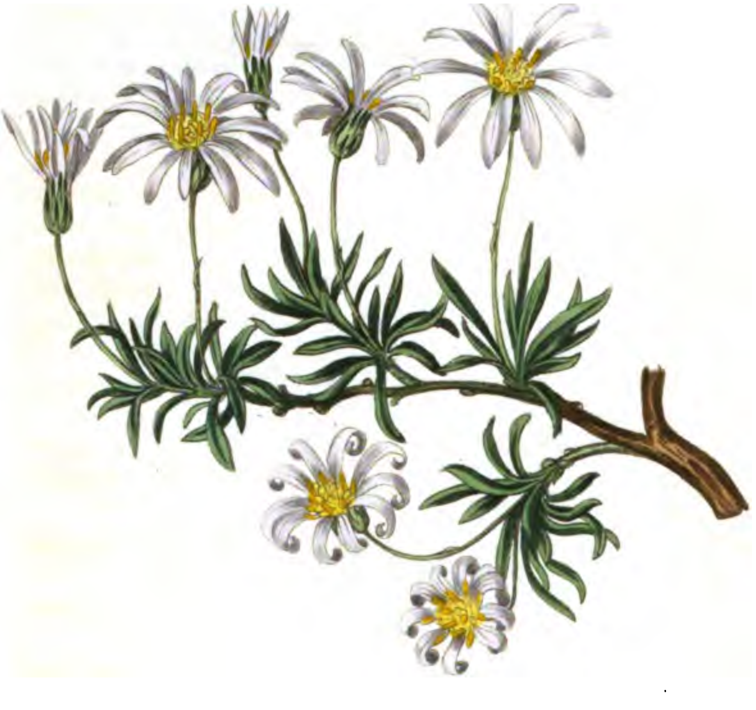
RHODODENDRON punctatum. β. *Bot. Reg.* 37.

Rhododendrum *punctatum* was first described by **Michaux** under the name of *minus;* an appellation applicable enough if only compared with *maximum,* but not at all so in reference to the whole genus.

It seems to vary considerably in the form and colour of its flowers. **Andrews's** figure, in the Botanist's Repository, represents the flower as smaller and much deeper coloured; in the variety β. of the Botanical Register the flower is much larger, but is free from all spotting; in our plant the flower in size was intermediate between the two, and two or three of the laciniæ in each were spotted with yellow, not green, dots.

Native of Carolina and Georgia. Flowers in June and July. Introduced in 1786 by Mr. **John Fraser.** Is considered as a hardy shrub, but its blossoming cannot be secured without prctection in the early part of the spring; our late frosts frequently destroying the buds before they open. Thrives best in sandy peat. Communicated by **John Walker,** Esq.

N.2286.



Syd. Edwards Del. Pub. by S. Curtis Walworth. Dec. 1. 1821. Weddell Sc.

(2286)

ASTER FRUTICULOSUS. SHRUBBY STAR-WORT.

****

Class and Order.

SYNGENESIA POLYGAMIA SUPERFLUA.

Generic Character.

Recept. nudum. *Pappus* simplex, *Corollæ radii* plures 10. *Calycis* imbricati squamæ inferiores patulæ.

Specific Character and Synonyms.

ASTER *fruticulosus;* fruticosus, pedunculis sub-solitariis unifloris foliis linearibus fasciculatis bis terve longioribus.

ASTER *fruticulosus;* fruticosus, foliis linearibus obtusiusculis glabris punctatis, pedunculis unifloris elongatis, calycibus imbricatis discum æquantibus. *Willd. Sp. Pl.* 3. *p.* 2018. *Hort. Kew. ed. alt.* 5. *p.* 49. *Jacq. Fragm. p.* 9. *t.* 9. *f.* 4.

ASTER *fruticulosus;* fruticosus, foliis linearibus punctatis, pedunculis unifloris nudis. *Syst. Nat.* 3. *p.* 552.

ASTER *fruticosus;* foliis linearibus punctatis glabris, calycibus imbricatis, caule fruticoso. *Sp. Pl.* 1225. *Thunb. Prodr.* 159.

ASTER africanus frutescens, foliis angustis et plerumque congestis. *Commel. Hort.* 2. *p.* 53. *t.* 27.

ASTER maritimus, fruticosus, hyssopi foliis confertis, flore albo. *Pluk. Mant.* 29. *t.* 340. *f.* 19.

ASTER *hyssopifolius;* fruticosus, foliis sparsis linearibus pubescentibus, pedunculis subaggregatis terminalibus, ramis adscendentibus tomentosis. *Berg. Cap.* 287?

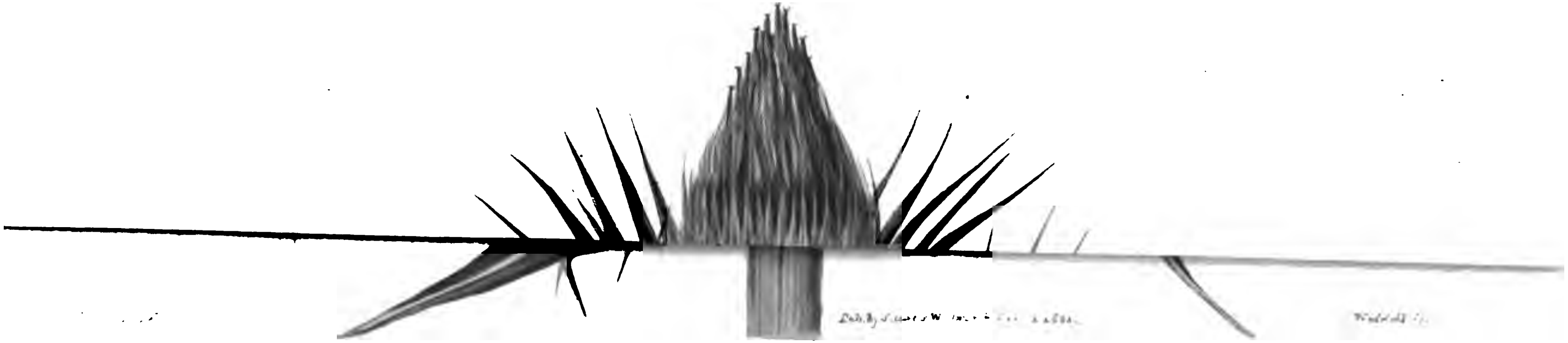
It appears to us that the plant which has usually been known in our Nurseries under the name of ASTER *fruticulosus* is the *angustifolius* of JACQUIN, having scattered, not aggregate, leaves; but JACQUIN'S, COMMELIN'S, and perhaps PLUKENET'S figures above referred to, seem to belong to the species we now give a faithful representation of from the pencil of the late Mr. Sydenham Edwards.

The plant was communicated, together with several other rare plants, by Mr. William Pringle, Nurseryman, formerly of Sydenham, but now of the King's Road, Chelsea. Flowers in May and June. Propagated by cuttings. Native of the Cape of Good Hope. Requires the protection of a greenhouse in the winter.

CORRIGENDA.

No. 2272. lin. 1 et 9 *pro* MICROCANTHA *lege* MICRACANTHA.
———— pag. 2, lin. 4, *pro* KITCHIN *lege* HITCHIN.
No. 2278. pag. 2, lin. ult. *pro* MACROCANTHA *lege* MICRACANTHA; vel dele totum CORRIGENDUM.

N.2287.



Pub. by [illegible] W[illegible]

Weddell sc.

CNICUS AFER. BARBARY CNICUS, OR TWIN-THORNED THISTLE.

****

Class and Order.

SYNGENESIA POLYGAMIA ÆQUALIS.

Generic Character.

Cal. imbricatus, ventricosus: squamis spinosis. *Pappus* plumosus. *Recept.* villosum.

Specific Character and Synonyms.

CNICUS *afer;* foliis sessilibus lanceolatis subtus tomentosis subrepandis: lobis emarginatis bispinosis, floribus pedunculatis subcorymbosis, calycinis squamis lanceolatis spinosis patentissimis. *Willd. Sp. Pl.* 3. *p.* 1682. *Hort. Kew. ed. alt.* 4. *p.* 483.

CARDUUS *afer;* foliis sessilibus lanceolatis pinnatifidis, lobis distantibus gemellis in longam spinam terminatis singulis. *Jacq. Hort. Schoenb.* 2. *p.* 80. *t.* 145.

CARDUUS *Diacantha;* foliis sessilibus lanceolatis subtus tomentosis, spinis binatis, floribus corymbosis. *Labill. Ic. Pl. Syr. Dec.* 2. *p.* 7. *t.* 3. *Poirét. Encycl. suppl.* 2. *p.* 199.

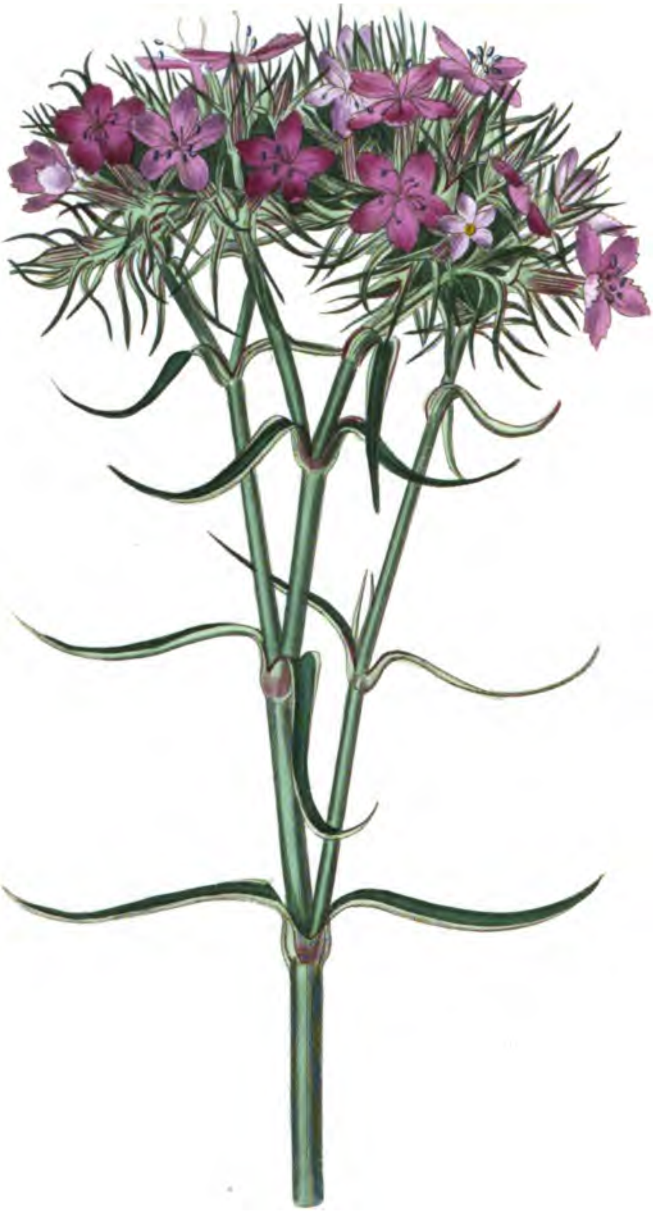
This is perhaps the handsomest species of all the Thistle tribe, and is really worthy to be admitted into the flower-garden.

We see no reason to believe that the CARDUUS *Diacantha* of *Labillardiere* and *afer* of JACQUIN, are distinct species, or even worthy to be recorded as separate varieties; the first name has therefore the right of priority; but JACQUIN'S name of *afer* having been preferred by WILLDENOW and the authors of the Hortus Kewensis may now be considered as best established, on which account we have adopted it.

The large size and spreading of the persistent, coloured upper squamæ of the calyx may be considered as making a near approach to the genus CARLINA. The receptacle is thickly covered with white soft hairs, amongst which the obovate seeds crowned with a feathery pappus are imbedded.

A hardy annual or biennial. Native of Barbary. Introduced by Mons. THOUIN in 1800. Communicated by Mr. JOSEPH KNIGHT of the Exotic Nursery, King's Road.

N.2288.



Curtis Del. Pub. by S. Curtis Walworth Jan 1 1822 Weddell Sc

DIANTHUS PSEUDARMERIA. LONG-SCALED PINK.

****

Class and Order.

DECANDRIA DIGYNIA.

Generic Character.

Cal. cylindricus, 1-phyllus, basi squamis 4. *Petala* 5, unguiculata. *Caps.* cylindrica, 1-locularis.

Specific Character and Synonyms.

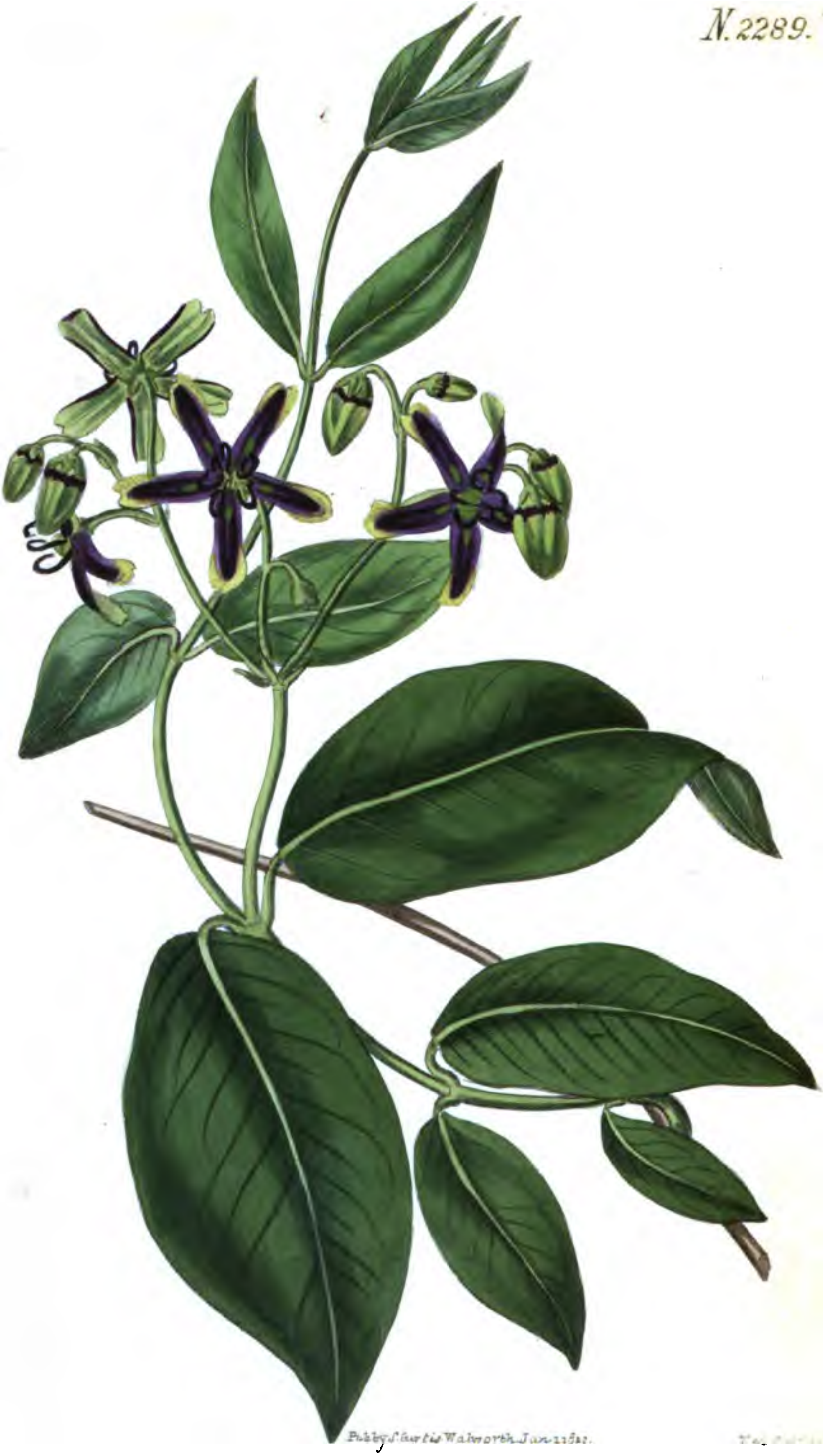
DIANTHUS *Pseudarmeria;* floribus aggregatis fasciculatis, squamis calycinis ovato-subulatis tubum æquantibus, foliis subulatis pubescenti-scabris strictis. *Fl. Taurico-cauc.* 1. *p.* 323. *Poir. encycl. suppl.* 4. *p.* 123.

DIANTHUS barbatus. *Pall. Ind. Taur. Habl. Taur. p.* 119.

This plant appears to us to have a nearer affinity with DIANTHUS *barbatus,* than with *D. Armeria,* from the former of which it is chiefly distinguished by being covered in every part with a very minute pubescence, hardly visible to the naked eye, and by a narrower, stiffer foliage. It appears by the quotation of MARSCHALL A BIEBERSTEIN to have been taken for *barbatus* by PALLAS and HABLITZ, and after all we should not be surprized if it should really turn out to be the origin of the Sweet William so long cultivated in our gardens.

A hardy perennial. Native of dry stony places in Tauria; where, as with us, it flowers in June and July. Communicated by Mr. ANDERSON from the Chelsea garden.

N. 2289.



Pub by S. Curtis Walworth Jan 1 1822. [illegible]

(2289)

PERIPLOCA GRÆCA. COMMON PERIPLOCA.

Class and Order.

PENTANDRIA DIGYNIA.

Generic Character.

Asclepiadea. *Massæ Pollinis* granulosæ, 5. *Filam.* distincta. *Cor.* rotata.

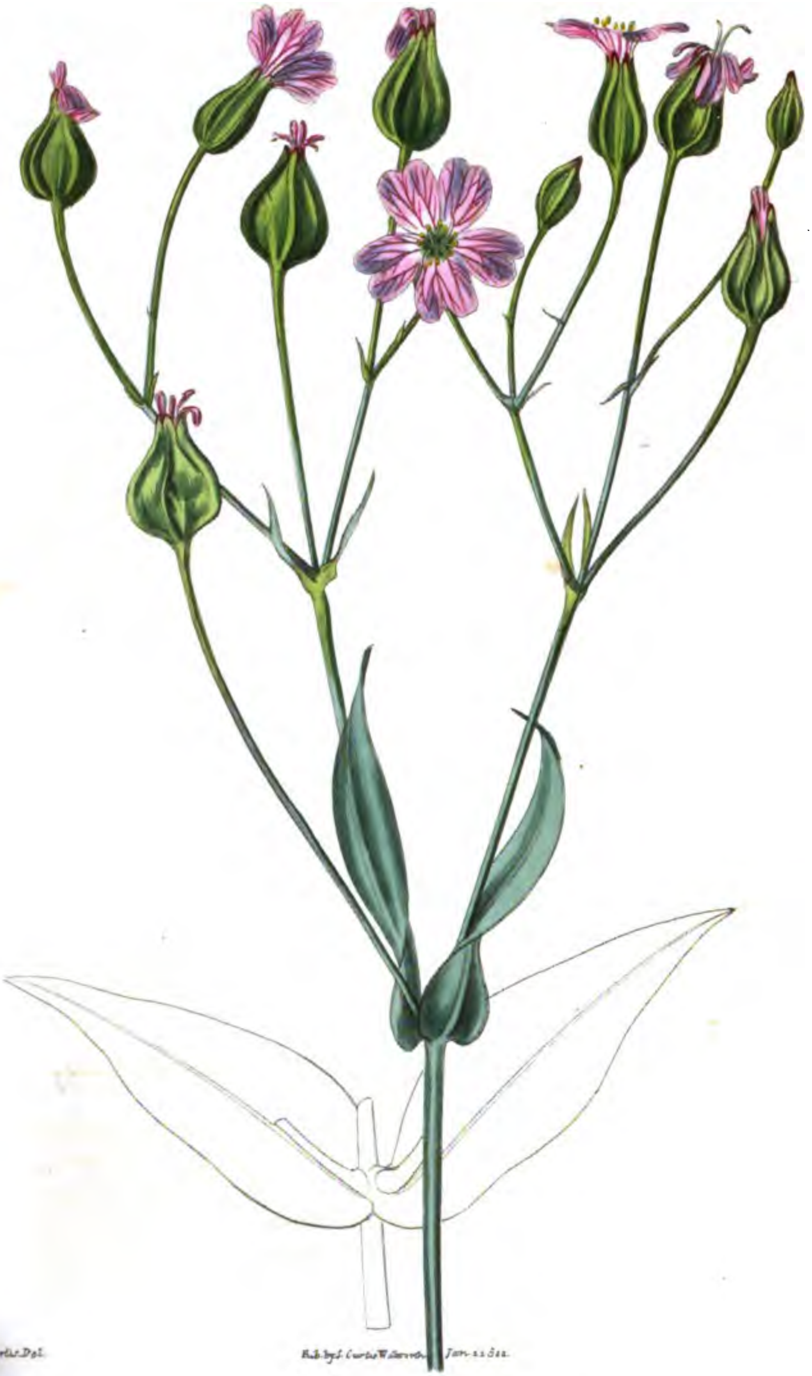
Specific Character and Synonyms.

PERIPLOCA *græca;* floribus interne hirsutis terminalibus. *Hort. Kew. ed. alt.* 2. *p.* 75. *Willd. Sp. Pl.* 1. *p.* 1248. *Lin. Sp. Pl.* 309. *Jacq. Misc.* 1. *p.* 11. *t.* 1. *f.* 2. *Lam. Ill. t.* 177. *Kniph. Cent.* 2. *Schmidt Arb.* 1. *p.* 46. *t.* 46. *Lam. Encycl.* 5. *p.* 187. *Smith Flor. græca.* 1. *p.* 165. *Ic.* 249.
PERIPLOCA altera. *Dod. pempt.* 408. *f.* 2
PERIPLOCA serpens angustiore folio. *Lob ic.* 631.
PERIPLOCA repens angustifolia. *Ger. emac.* 902. *f.* 1. quoad-figuram.
APOCYNUM folio oblongo. *Bauh. Pin.* 303.
APOCYNUM 2, angustifolium. *Clus. Hist.* 1. *p.* 125.
APOCYNUM repens. *Cam. Epit.* 842. *Park. Theatr.* 386. *f.* 2.
APOCYNUM sive PERIPLOCA scandens folio longo, flore purpurante. *Bauh. Hist.* 2. *p.* 133. *Raj. Hist.* 2. *p.* 1087.

PERIPLOCA *græca* is a handsome climber, which under favourable circumstances will extend its branches from thirty to forty feet; and was once in great request for covering trellis work, arbours, &c. but is now more generally planted against a pole or the trunk of a tree; in the former case when it has overtopped its support and formed a spreading head with the branches entwined together, it makes a very handsome appearance, especially when in blossom, for the flowers, though chiefly of a sordid purple colour, yet being margined with green, are by no means void of beauty, and are interesting to the botanist from their very curious structure. It seldom bears seed in this country, but when it does the seed-pods are long, somewhat curved, and generally united at their points.

Native of Syria and the Grecian islands; is quite hardy; will grow in any soil; and is easily propagated by layers; flowers in July and August.

N.2290.



Curtis Del.

Pub. by S. Curtis Walworth Jan. 1. 1822.

SAPONARIA VACCARIA. COW SOAP-WORT.

****

Class and Order.

DECANDRIA DIGYNIA.

Generic Character.

Cal. 1-phyllus nudus. *Petala* 5, unguiculata. *Caps.* oblonga, 1-locularis.

Specific Character and Synonyms.

SAPONARIA *Vaccaria;* calycibus pyramidatis quinquangularibus, foliis ovatis acuminatis sessilibus. *Sp. Pl.* 585. *Willd.* 2. *p.* 668. *Hort. Kew. ed. alt.* 3. *p.* 77. *Gærtn. Sem.* 2. *p.* 234. *t.* 130. *f.* 7. *Lam. Illustr. t.* 376. *f.* 2. *Pollich Pal. n.* 408. *Decand. Fl. franç.* 4. *p.* 737. *Hall. Hist. n.* 907.
GYPSOPHILA *Vaccaria;* foliis ovatis amplexicaulibus glaberrimis, petalis emarginatis erosis. *Smith Prodr. Fl. Græc.* 1. *p.* 279.
LYCHNIS Vaccaria. *Scop. Carn.* 1. *n.* 511.
LYCHNIS segetum rubra, foliis Perfoliatæ. *Bauh. Pin.* 204. *Raj. Hist.* 2. *p.* 999. *Tourn. Inst.* 335.
VACCARIA. *Dod. Pempt. p.* 104. *Bauh. Hist.* 3. *part.* 2. *p.* 354. *Ger. emac.* 492.
MYAGRUM III. *Tabern. Kreuterbuch p.* 1253. *ed. Basil* 1664.
ISATIS sylvestris Vaccaria dicta. *Lob. ic.* 352. *f.* 2.
LYCHNIS segetum Vaccaria rubra dicta. *Park. Theatr.* 1. *p.* 633.

Botanists are not agreed to what genus this plant should be referred, but most of them since his time have followed *Linnæus* in referring it to SAPONARIA; Sir JAMES SMITH has however, in his Prodromus of the Grecian Flora, united it with GYPSOPHILA, to which he has probably been induced

by its angular calyx and divaricate habit. According to Gærtner the Capsule is five-celled at the base and one-celled at the upper part, a structure, which some may perhaps think sufficient to separate it from both these genera. To avoid confusion we adhere to the established name.

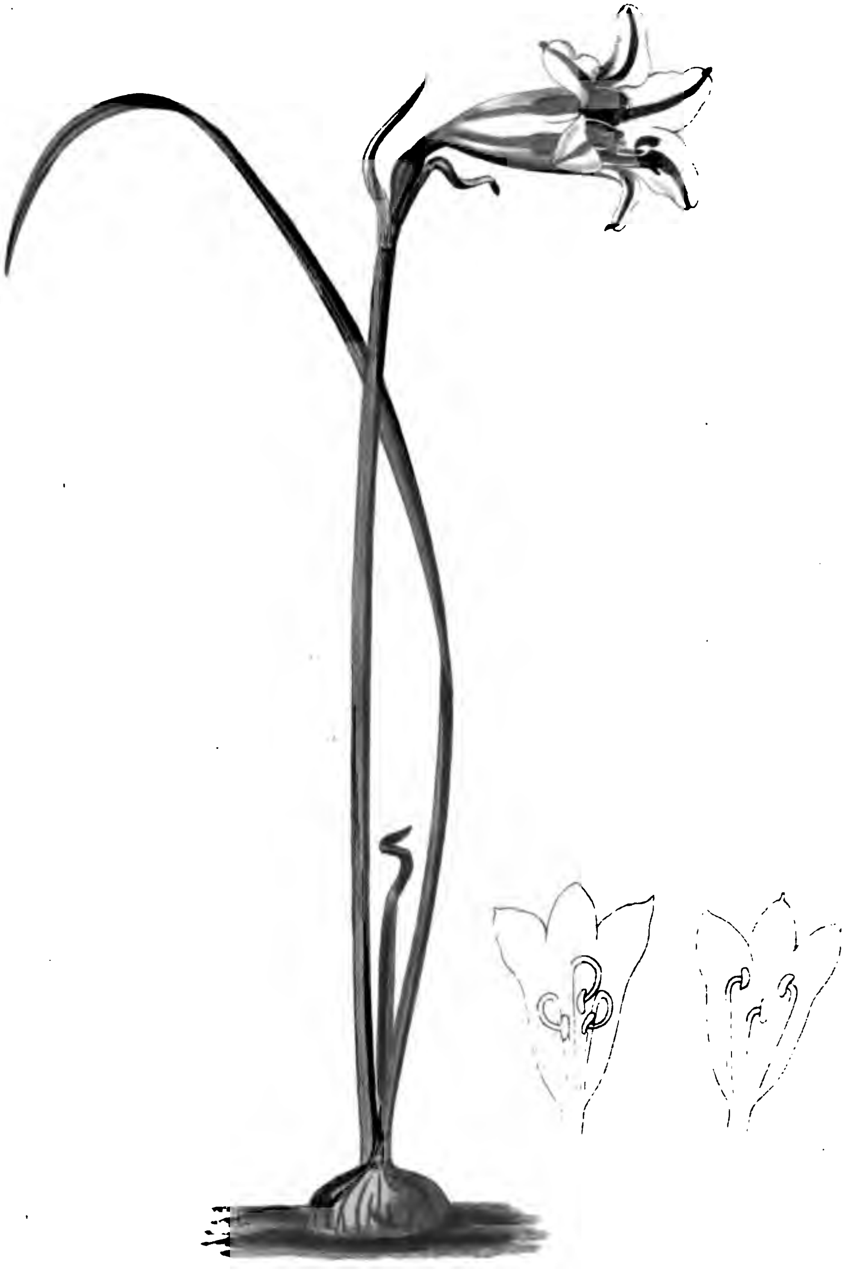
The name of Vaccaria has been given it, it is said, from its being a favourite food of Cows. In the Hortus Kewensis it has the English name of Perfoliate Soap-wort, which we think it right to change because another species is recorded by the name of *perfoliata* in Willdenow's Enumeratio.

There appears to be two varieties, one with smaller, the other with larger flowers, of which our figure represents the latter.

From the brilliant colour of its flowers it is an ornamental annual plant, requiring only to be sown in the spring where it is intended to remain, and to be kept clear from weeds. We do not know that any coloured figure of it has been before given; that in the Flora Græca being as yet unpublished. Native of Germany and France.

Communicated by N. S. Hodson, Esq. from the Botanic Garden, at Bury St. Edmunds.

N. 2291.



W. Herbert Del. Pub by S Curtis Walworth Jan 1 1822 Weddell S.

GASTRONEMA CLAVATUM. STRIPED-FLOWERED GASTRONEMA.

****

Class and Order.

HEXANDRIA MONOGYNIA.

Generic Character.

Bulbus subrotundus. *Folia* decidua. *Scapus* æstivus. *Germen* pedunculo rectè continuatum, trigonè ovale. *Tubus* intùs brevis parte inferiore curvatâ, arctâ, superiore ventricosâ amplâ. *Laciniæ* breves, subæquales. *Filamenta* conniventia, alternè longiora; interiora summâ ferè, exteriora mediâ ferè parte tubi regionis ventricosæ inserta; superiora tria prope tubi latera tortè declinata, inferiora recta apicibus conniventibus. *Antheræ* breves, incumbentes. *Stylus* declinatus, laciniæ inferiori adpressus. *Stigma* trifidum. *W. H.*

Specific Character and Synonyms.

GASTRONEMA *clavatum,* foliis linearibus, scapo 1—2-floro, corollâ albâ rubro striatâ, laciniis brevibus reflexis.

AMARYLLIS Pumilio. *Hort. Kew.* 1. 415. *ed.* 2. 2. 223. *Willd. Sp. Pl.* 2. 50. *Ker Journ. Sc. et A.*

CYRTANTHUS uniflorus. *Bot. Reg.* 168.

AMARYLLIS clavata. *L'Heritier Sert. Angl.* 11.

GASTRONEMA clavatum. *Nobis in Appendice, p.* 30.

DESCR. *Bulb* small, roundish. *Leaves* very narrow, erect. *Scape* reddish at bottom, bearing one or two flowers. *Germen* triangularly oval, continued from the peduncle. Lower part of the *tube* narrow, cylindrical curved, green; upper part wide, ventricose, white, with six conspicuous red stripes. *Limb* short, with the segments reflex. *Filaments* conniving, the alternate longer; the inner inserted near

the top, the outer near the middle of the ventricose part of the tube; the three upper tortuously declined round the sides of the tube, the three lower straight, with their points conniving. *Anthers* short, incumbent. *Style* declined and pressed against the lower petal. *Stigma* trifid.

The seeds of this genus are probably flat and foliaceous, like those of Cyrtanthus and the other genera allied to it. The sketch was taken from a bulb imported by Mr. Burchell from the Cape, which flowered in the Spofforth collection. Specimens of this plant vary a little in the brilliancy of the stripes and the expansion of the limb; but I have never seen the germ and lower part of the tube red, as it is represented in the Botanical Register, nor the corolla so large. A bulb in Mr. Burchell's garden produced a two-flowered stem in the open border, on which account the name *clavatum* has been restored, *uniflorum* being improper and *Pumilio* having reference to the large bulbs of Amaryllis, &c. and not to the genus Gastronema. For the wide difference between Gastronema and Cyrtanthus, see the Appendix, p. 28. *W. H.*

The outline figures represent

1. A perpendicular section of the flower, the upper half.
2. Ditto, the lower half.

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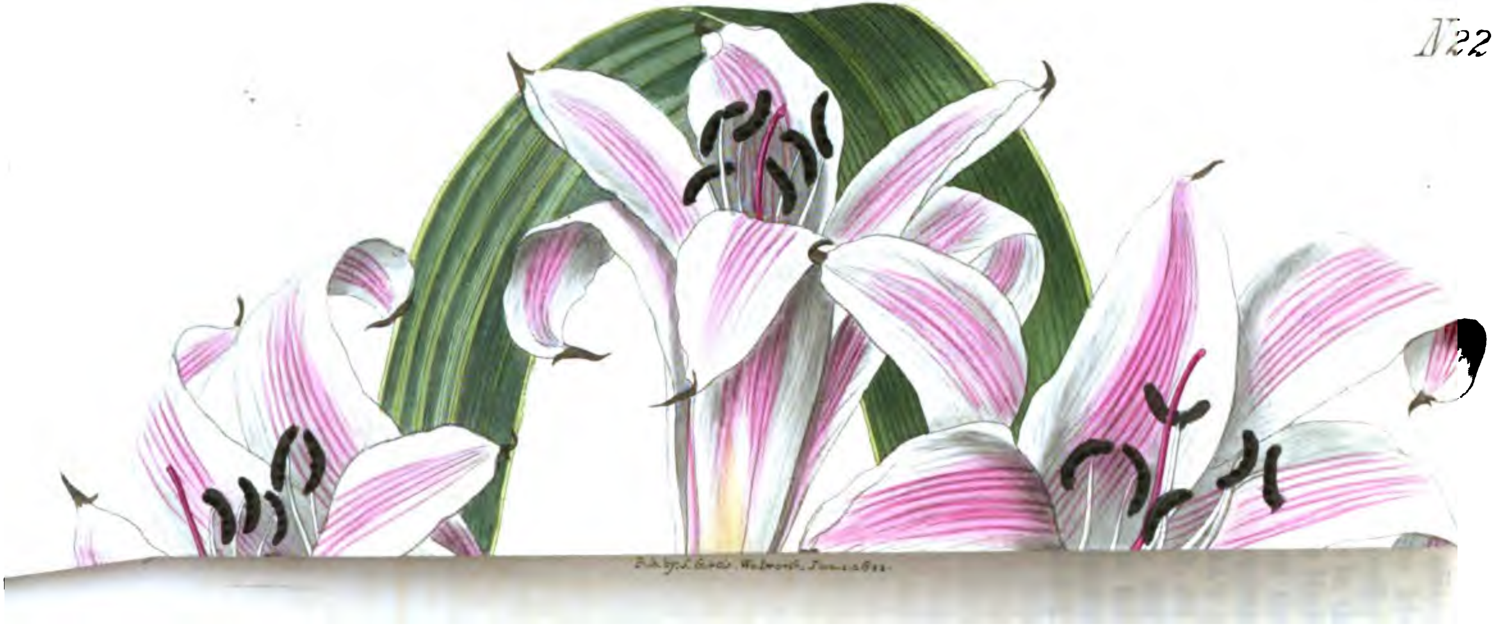

Pub. by S. Curtis, Walworth, June 1, 1822.

CRINUM MOLUCCANUM. MOLUCCA CRINUM.

****

Class and Order.

HEXANDRIA MONOGYNIA.

Generic Character.

Bulbus columnaris vel sphæricus. *Folia* multifaria (nisi in C. *disticho*). *Scapus* 1—60-florus, seminibus maturescentibus flaccidus. *Germen* mediâ parte crassius, triloculare, sessile vel pedunculo directè continuatum. *Tubus* trigonè cylindricus, germine directè continuatus eoque gracilior. *Laciniæ* alternæ sub-æquales, internæ plerumque latiores. *Limbus* patens vel semipatens, ante expansionem inclinatus vel nutans. *Filamenta* extra faucem tubi inserta, alterna vix profundiùs et marginibus laciniarum interiorum puncto insertionis adnata. *Stylus* gracilis, apicem versus tenuior. *Stigma* obtusum, trigonum, vel trilobatum. *Capsula* dissepimentorum destructione 1—2-locularis, sæpe difformis valvis nullis vel obsoletis, seminibus temere disrupta. Ovula in pluri-spermis vix discreta, sed massæ cuidum non separabili in medio positæ adhærentia, apicibus versùs dissepimenta tendentibus. *Semina* carnosa, integumento viridi non separabili, sæpiùs magna, difformia; embryo cylindrico radiculâ temere albumen perforante. *W. H.*

Specific Character and Synonyms.

CRINUM *moluccanum;* bulbo sphærico, spatha bifida erecta obtusa, floribus sessilibus, tubo limbum æquante, foliis lanceolatis apice elongatis deorsum undulatis.

CRINUM moluccanum. *Roxb. Fl. Ind. or.* inedit. *Ker in Journ. Sc. & Arts. Herbert supra n.* 2221. *p.* 6.

DESCR. "*Bulb* nearly sphærical, the size of a goose's egg, when stripped of its dead integuments of a pale purple colour, very different from the deep crimson of CRINUM *Zeylanicum.*" Leaves pale green, striate lanceolate, tapering to a point, undulated towards the base, nearly two feet long, and

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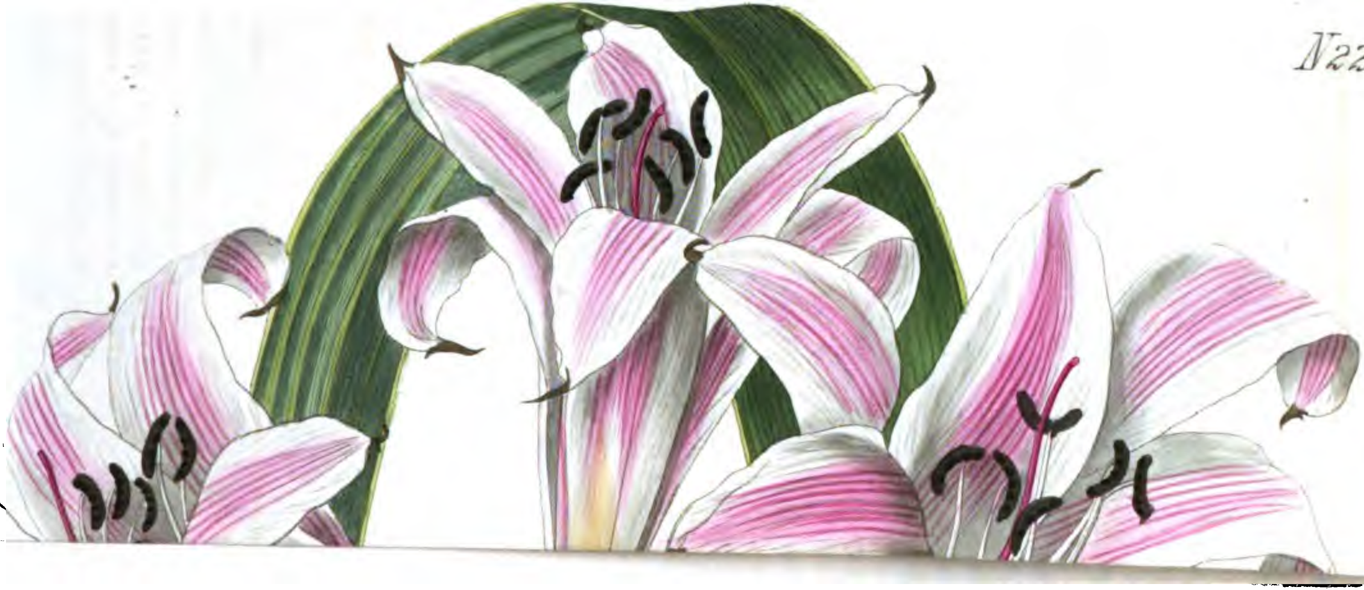


CRINUM MOLUCCANUM. MOLUCCA CRINUM.

****

Class and Order.

HEXANDRIA MONOGYNIA.

Generic Character.

Bulbus columnaris vel sphæricus. *Folia* multifaria (nisi in C. *disticho*). *Scapus* 1—60-florus, seminibus maturescentibus flaccidus. *Germen* mediâ parte crassius, triloculare, sessile vel pedunculo directè continuatum. *Tubus* trigonè cylindricus, germine directè continuatus eoque gracilior. *Laciniæ* alternæ sub-æquales, internæ plerumque latiores. *Limbus* patens vel semipatens, ante expansionem inclinatus vel nutans. *Filamenta* extra faucem tubi inserta, alterna vix profundiùs et marginibus laciniarum interiorum puncto insertionis adnata. *Stylus* gracilis, apicem versus tenuior. *Stigma* obtusum, trigonum, vel trilobatum. *Capsula* dissepimentorum destructione 1—2-locularis, sæpe difformis valvis nullis vel obsoletis, seminibus temere disrupta. Ovula in pluri-spermis vix discreta, sed massæ cuidum non separabili in medio positæ adhærentia, apicibus versùs dissepimenta tendentibus. *Semina* carnosa, integumento viridi non separabili, sæpiùs magna, difformia; embryo cylindrico radiculâ temere albumen perforante. *W. H.*

Specific Character and Synonyms.

CRINUM *moluccanum*; bulbo sphærico, spatha bifida erecta obtusa, floribus sessilibus, tubo limbum æquante, foliis lanceolatis apice elongatis deorsum undulatis.
CRINUM moluccanum. *Roxb. Fl. Ind. or.* inedit. *Ker in Journ. Sc. & Arts. Herbert supra n.* 2221. *p.* 6.

DESCR. "*Bulb* nearly sphærical, the size of a goose's egg, when stripped of its dead integuments of a pale purple colour, very different from the deep crimson of CRINUM *Zeylanicum*." Leaves pale green, striate lanceolate, tapering to a point, undulated towards the base, nearly two feet long, and

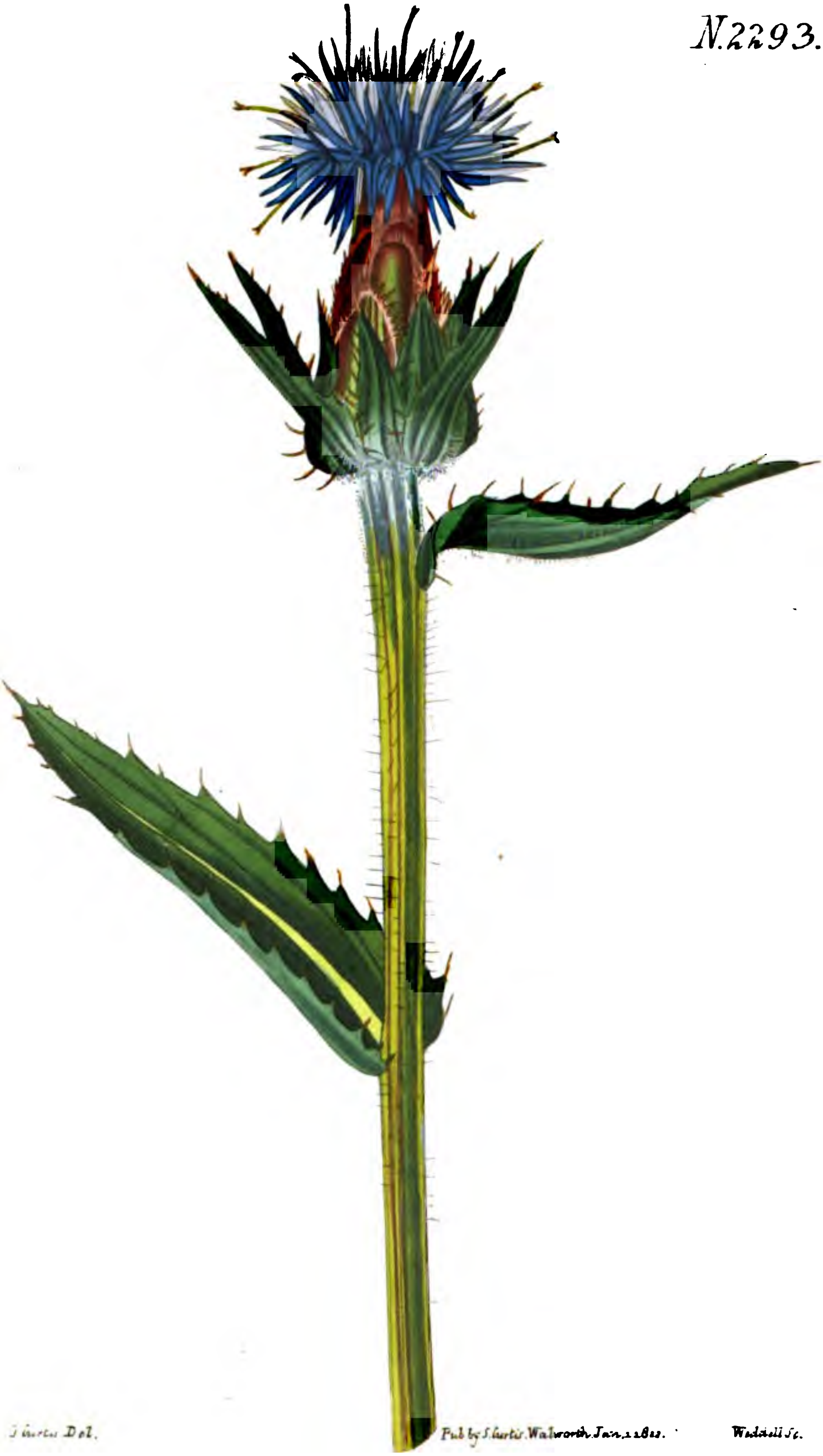
an inch and a half wide at the base, margin a little rough. *Scape* eight inches high, flat on one side and convex on the other, reddish purple. *Spathe* membranaceous, two-leaved, erect, obtuse, striate, flesh-coloured. *Flowers* in our specimen four, sometimes six, large, shewy. *Germen* sessile, green, unequally three-cornered: *tube* striate, flesh-coloured, equal in length to the *limb*, which is funnel-shaped: the laciniæ striate, flesh-coloured in the middle, with white margins, somewhat recurved at the point. *Stamens* and *style* declined, equal, shorter than the laciniæ.

The plant from which our drawing was taken flowered early in September at the Earl of Carnarvon's, High Clere, Berks; and as we were informed by Mr. Gowen, his Lordship's Secretary, the bulb was received from Dr. Carey, of Serampore.

Mr. Herbert considers this species as very nearly allied to C. *speciosum*, respecting which and some other species of Crinum he has requested us to insert the following observations:—

"The Ceylon bulb figured in the Bot. Reg. 579, under the name of Amaryllis *insignis*, or Roxburgh's Amaryllis, is the plant mentioned Appendix p. 27, as being 'in appearance much like the Bengal Crinum Speciosum, and probably of that species.' The inflorescence, as represented, is only distinguishable from that of C. *speciosum* by the superior size of the flower and a shorter style, which however does not appear as if it had grown out to its full length. It is singular that although the Editor has mentioned four Crinums as nearly allied to it, he has taken no notice of C. *speciosum* supra 2217, from which it yet remains to be shewn that it is a distinct species. Neither the Bengal *speciosum* nor this Ceylon species or variety appear to have been known to Dr. Roxburgh, and it is certainly not his C. *latifolium*, as quoted in the Bot. Reg. There is a bulb of *latifolium* in the Spofforth collection, sent by Dr. Carey, who had it from Dr. Roxburgh, closely allied to *Zeylanicum*, having the same strong scent to the coats of the bulb, the same habit and appearance, leaves very similar but more undulated, with a rougher margin and not tipped with red. L'Heritier's description of a pedunculated C. *latifolium* is probably erroneous; because all the known species of the subdivision Ornatæ have the germen sessile. We take this opportunity of mentioning that amongst the Longifoliæ, which are all extra-tropical and pedunculated, *flaccidum* as well as *longiflorum* has the filaments knobbed. C. *longiflorum* is a hardy species." *W.H.*

N.2293.



S. Curtis Del. Pub by S. Curtis Walworth Jan. 1. 1822. Weddell Sc.

CARTHAMUS CÆRULEUS. BLUE-FLOWERED CARTHAMUS.

****

Class and Order.

SYNGENESIA POLYGAMIA ÆQUALIS.

Generic Character.

Recept. paleaceo-setosum. *Cal.* ovatus, imbricatus squamis apice subovato-foliaceis. *Pappus* paleaceo-pilosus s. nullus.

Specific Character and Synonyms.

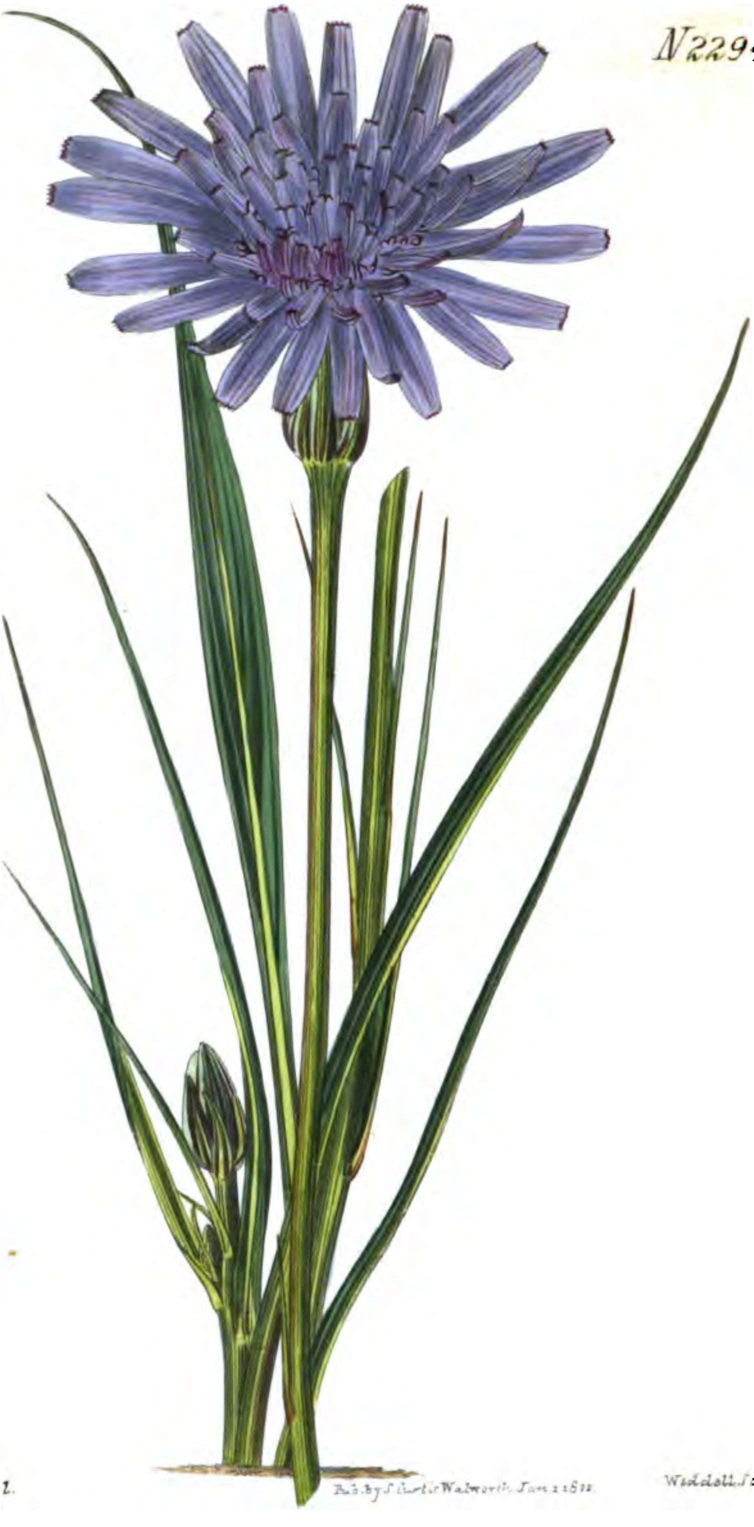
CARTHAMUS *cæruleus;* caule subunifloro, foliis ovato-lanceolatis spinoso-dentatis. *Willd. Sp. Pl.* 3. *p.* 1709. *Hort. Kew. ed. alt.* 4. *p.* 492.
CARTHAMUS *cæruleus;* foliis lanceolatis spinoso-dentatis caule subunifloro. *Sp. Pl.* 1163. *Lam. Encycl.* 1. *p.* 638.
CNICUS cæruleus asperior. *Bauh. Pin.* 378.
CNICUS alter. *Clus. Hisp.* 453. *f.* 454.—*Hist.* 2. *p.* 152.
CNICUS flore cæruleo. *Lob. ic.* 2. 19.
CNICUS alter cæruleus. *Ger. em.* 1169. *f.* 2. *Tabern. Kreuterbuch* 1076.
CNICUS alter perennis Clusii. *Park. Theatr. p.* 260. *f.* 3.
CARDUUS erectus cæruleus Cnici facie foliis dissectioribus. *Moris. Hist.* 3. *p.* 159. §. 7. *t.* 34. *f.* 19. *saltem quoad figuram.*
ONOBROMA cæruleum. *Gaert. Sem.* 2. *p.* 380. *t.* 160. *f.* 7.

CARTHAMUS *cæruleus* and *tingitanus* have been by some supposed to be the same species, and LINNÆUS himself has observed that they are too nearly related; he has indeed quoted MORISON'S figure under his C. *tingitanus,* which is only a copy of CLUSIUS'S, referred to by LINNÆUS as representing his C. *cæruleus;* and this has probably occasioned the confounding of the two species. LAMARCK, whilst he supposes that Linnæus's *tingitanus* may be a very distinct species from *cæruleus*, has very properly added the synonym of Morison to the latter, of which he makes it a variety.

Every one of the figures referred to in our list of synonyms is either a reprint or copy of that of Clusius, and as far as our researches have gone we find no other representation of this rare plant. From Cavanille's figure and description of Carthamus *tingitanus*, it appears to us to be a distinct though nearly related species, that having pinnatifid leaves, whereas our plant has the margin of its leaves only slightly serrate.

Native of Spain, a hardy perennial. Communicated by our friend A. B. Lambert, Esq. from his collection at Boyton.

N 2294.



J. Curtis Del.

Pub. by S. Curtis Walworth Jan 1 1822.

Weddell Sc.

(2294)

SCORZONERA PURPUREA, β. GRANDIFLORA. LARGE PURPLE-FLOWERED VIPER'S-GRASS.

Class and Order.

SYNGENESIA POLYGAMIA ÆQUALIS.

Generic Character.

Recept. nudum. *Pappus* plumosus, substipitatus. *Calyx* imbricatus squamis margine scariosis.

Specific Character and Synonyms.

SCORZONERA *purpurea;* foliis lineari-subulatis canaliculato-triquetris, caule ramoso. *Willd. Sp. Pl.* 3. *p.* 150. *Hort. Kew. ed. alt.* 4. *p.* 435.

SCORZONERA *purpurea;* foliis lineari-subulatis integris planis, pedunculis cylindricis. *Lin. Sp. Pl.* 1113. *Lam. Encycl. Bot.* 7. *p.* 15. *Ejusdem Illustr. t.* 647. *f.* 3.

SCORZONERA *purpurea;* foliis lineari-subulatis integris canaliculato-triquetris, pedunculis cylindricis. *Jacq. Austr.* 1. *p.* 23. *t.* 35.

SCORZONERA caule ramoso tereti, foliis linearibus acuminatis, calycibus obtusiusculis. *Gmel. Sib.* 2. *p.* 7. *t.* 2.

SCORZONERA angustifolia subcærulea. *Bauh. Pin.* 275.

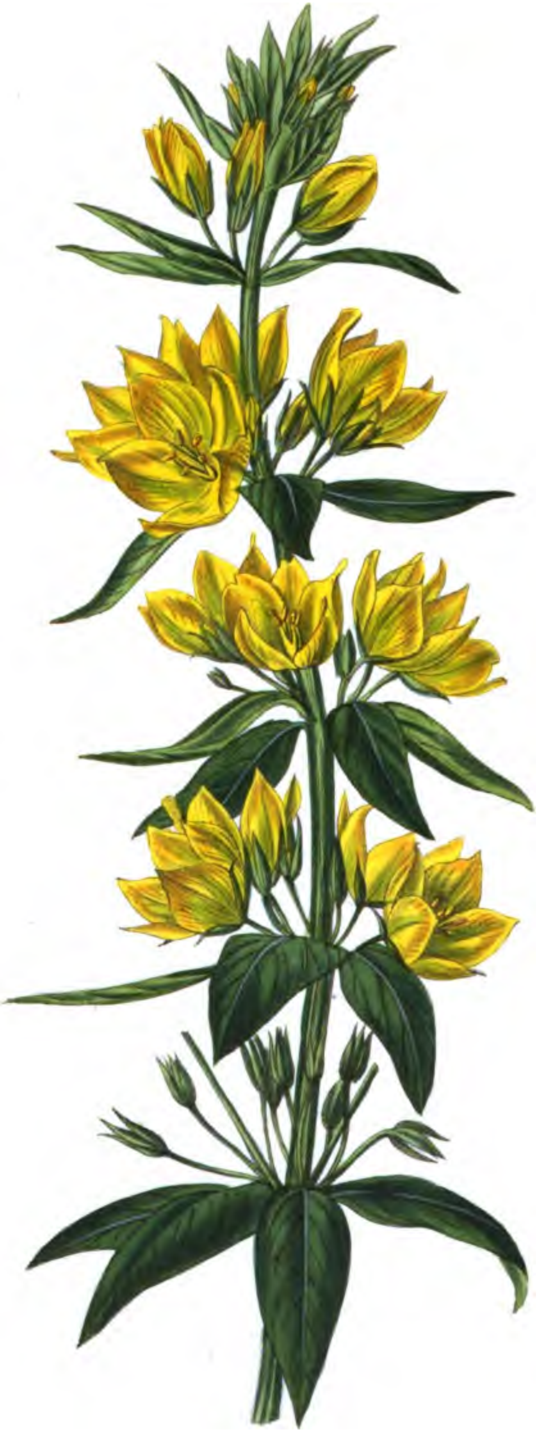
SCORZONERA angustifolia elatior pannonica 4. *Clus. Hist.* 2. *p.* 139. S. pannonica 5ta. *Clus. Pan. p.* 639.

SCORZONERA sylvestris, foliis angustis, flore cæruleo. *Mentz. Pugil. t.* 1. *f.* 1.

The plant from which our drawing was made was raised at the Fulham Nursery from seeds gathered on the Carpathian Mountains by Mr. HOWE. It is a showy plant when the flowers are expanded, but appears to us to be only a variety of SCORZONERA *purpurea,* although a much stouter plant, with larger flowers, than that figured by JACQUIN in his Flora Austriaca.

A hardy perennial. Flowers in May. Cultivated by PHILIP MILLER in 1759. Communicated by Messrs. WHITLEY, BRAME, and MILNE.

N.2295.



Curtis Del. Pub. by S. Curtis Walworth. Jan 2 1822. Weddell Sc

LYSIMACHIA VERTICILLATA. VERTICILLATE LOOSE-STRIFE.

****

Class and Order.

PENTANDRIA MONOGYNIA.

Generic Character.

Cor. rotata. *Caps.* globosa, mucronata, 10-valvis.

Specific Character and Synonyms.

LYSIMACHIA *verticillata;* panicula composita verticillata, pedunculis multifloris simplicibusque, calycibus capsula maculata longioribus. *Fl. taur. caucas.* 1. *p.* 141. *et.* 3. *p.* 135. *Marsch. Cent.* 1. *t.* 32.

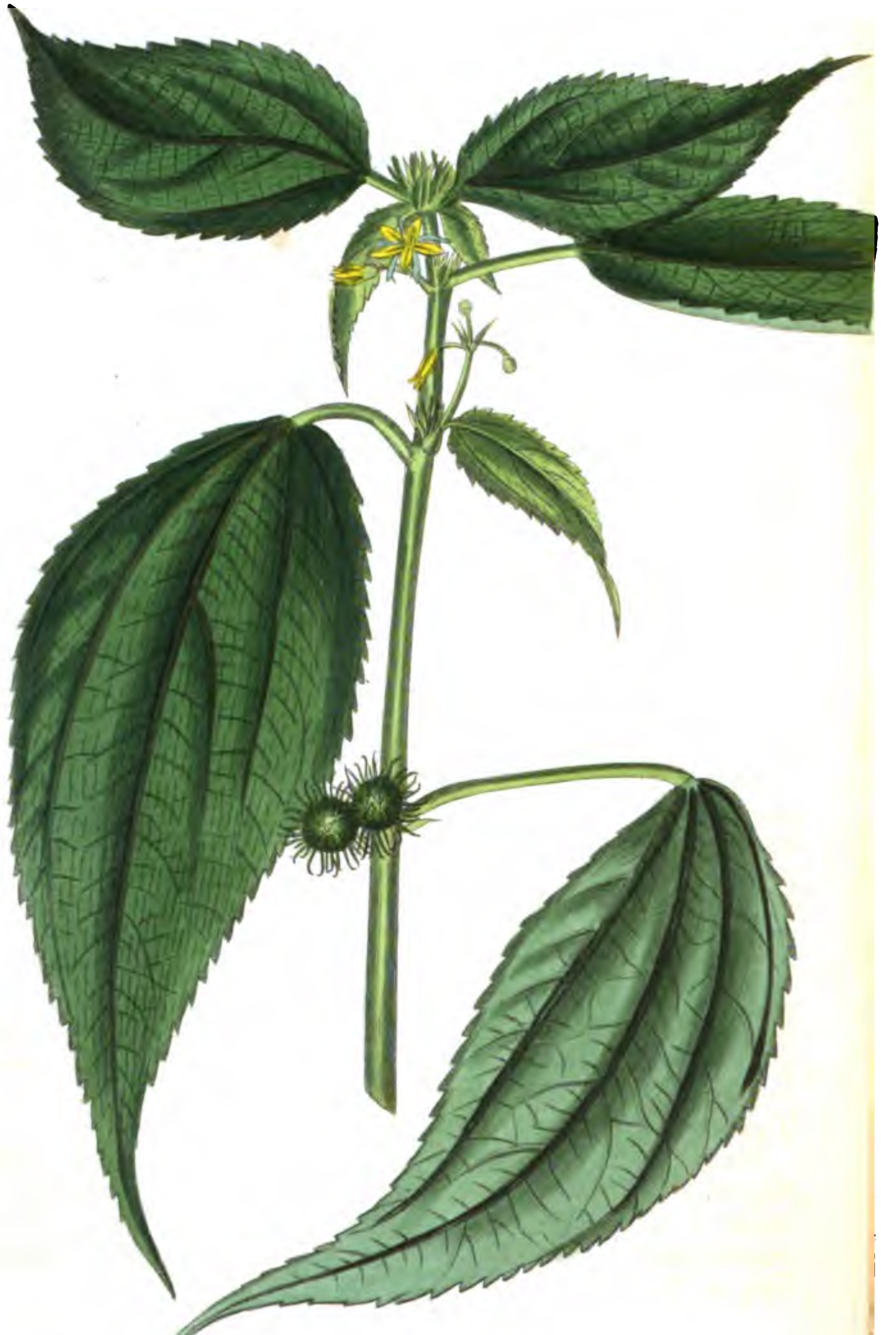
LYSIMACHIA *verticillata;* foliis verticillatis oblongo-lanceolatis petiolatis, pedunculis axillaribus uni-triflorisque, petalis ovatis acutis glanduloso-ciliatis, caule pubescente. *Willd. Enum. p.* 195.

DESCR. *Stem* octangular, rough, branched: *branches* naked at the lower part, upwards opposite-leaved, each petiole bearing four flowers, the peduncles being inserted on the footstalk and not in the axils. The centre of the stem bears four leaves in whorls at equal distances with four flowers on each footstalk. *Leaves* elliptical, villous on both sides, minutely ciliate at the margins. *Flowers* yellow, very like those of the common Loose-strife; but the calyxes entirely without the red margin so constant in that; *stamens* not half the length of the corolla.

Distinguished from LYSIMACHIA *punctata,* by the want both of the black spots in the leaves and the orange coloured spots in the corolla; from *vulgaris,* which it more resembles in habit, by the calyx wanting the red margins, and by the flowers growing in much more regular and equidistant whorls, supported almost constantly by four leaves or leaf-like bractes; but on the side branches these are generally in pairs.

Native of the woods of Tauria and Caucasus. Flowers in July and August. A hardy ornamental perennial. Communicated by Mr. **Anderson** from the Chelsea garden.

N.2296.



S. Curtis Del. Pub. by S. Curtis Walworth. Feb. 1. 1822. Weddell sc.

TRIUMFETTA ANNUA, β. ANNUAL TRIUMFETTA.

****

Class and Order.

DODECANDRIA MONOGYNIA.

Generic Character.

Cor. 5-petala. *Cal.* 5-phyllus. *Capsula* hispida, in quatuor vel quinque dissiliens.

Specific Character and Synonyms.

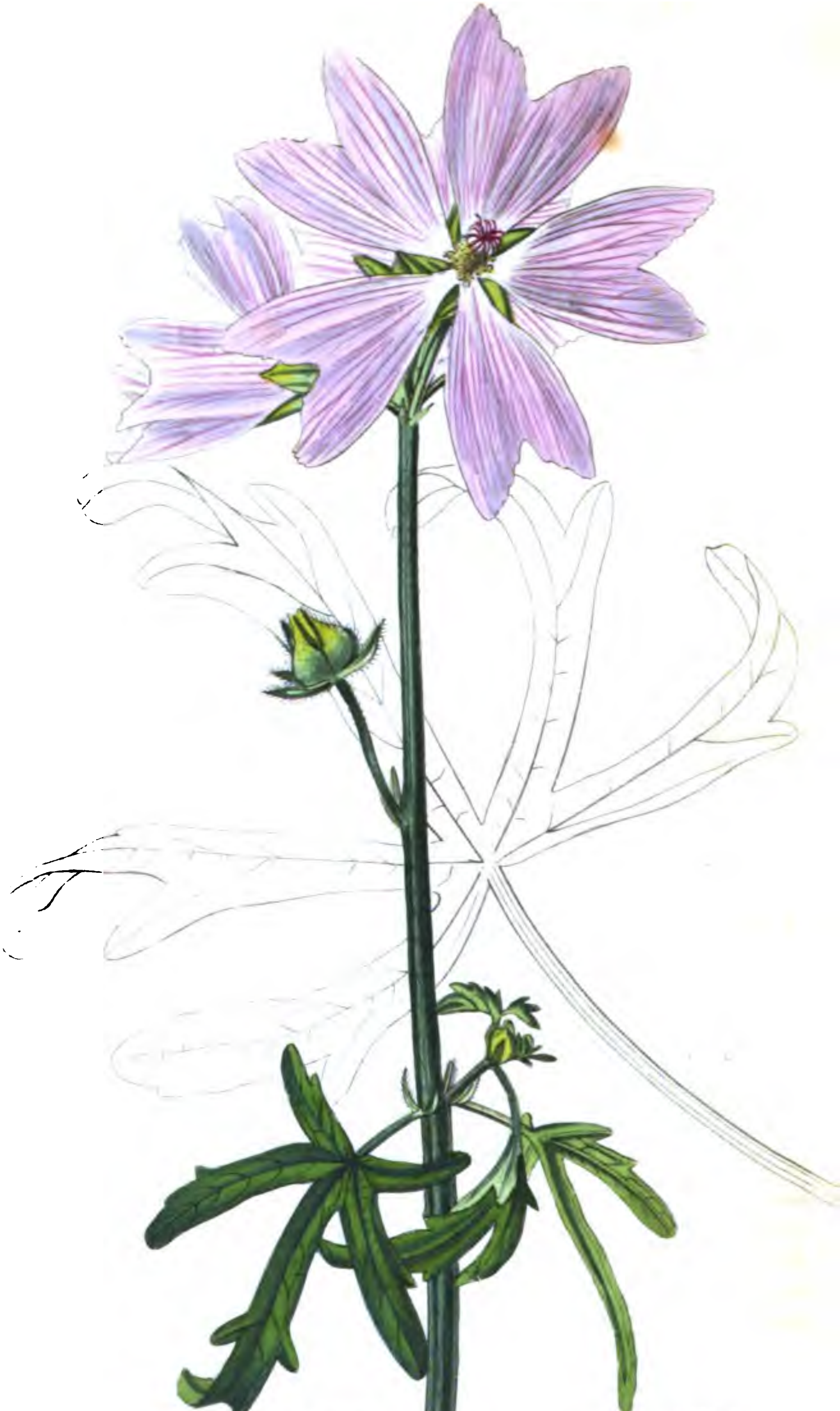
TRIUMFETTA *annua;* foliis ovatis serratis, pedunculis axillaribus trifloris, fructibus hamato-aculeatis: aculeis nudis.
TRIUMFETTA *annua;* foliis ovatis indivisis rarius lobatis. *Lin. Mant.* 73. *Willd. Sp. Pl.* 2. *p.* 856.
TRIUMFETTA foliis oblongo-ovatis obtusis serratis, petiolis longissimis. *Mill. ic.* 2. *p.* 199. *t.* 298.
TRIUMFETTA *indica;* foliis ovato-rhomboideis indivisis subtus tomentosis, fructibus axillaribus, aculeis nudis. *Lam. Encycl.* 3. *p.* 420?
(β.) *foliis ovato-lanceolatis acuminatis.*

The leaves of most of the species of TRIUMFETTA vary much in form; most of them that are not generally lobed, shew a disposition to become so occasionally. In our plant the leaves were considerably more elongated at the point than in MILLER's figure, but we consider it only as a mere variety of the same species.

The flowers in this species are perfect, having both calyx and corolla; it therefore belongs to BARTRAMIA of GAERTNER. The three-flowered peduncles, added to the prickles and the outer covering of the capsule being smooth, we believe, will be found the best characters to distinguish the TRIUMFETTA *annua* from the other known species.

Native of the East Indies. Flowers in August and September. Being an annual is propagated by seeds only, which however it brings to maturity in our stoves. Communicated by Mr. BLAKE from the collection of J. VERE, Esq. at Kensington Gore.

N.2297.



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(2297)

MALVA ALCEA. VERVAIN MALLOW.

Class and Order.

MONADELPHIA POLYANDRIA.

Generic Character.

Cal. duplex: exterior 3-phyllus. *Caps.* plurimæ monospermæ.

Specific Character and Synonyms.

MALVA *Alcea;* caule erecto, foliis inferioribus angulatis; superioribus quinquepartitis scabriusculis, calycis exterioris foliolis oblongis obtusis. *Willd. Sp. Pl.* 3. *p.* 790. *Hort. Kew. ed. alt.* 4. *p.* 217.

MALVA *Alcea;* caule erecto, foliis multipartitis scabriusculis. *Lin. Sp. Pl.* 971. *Scop. Carn.* 2. *p.* 43. *Host. Syn. Pl. Austr. p.* 384. *Poll. Pal. n.* 660. *Zorn. ic.* 219.

MALVA *Alcea;* caule erecto glabro, foliis cordatis; inferioribus subrotundo-peltatis crenatis; reliquis profunde quinquepartitis. *Cav. Diss. p.* 75. *t.* 17. *f.* 2.

MALVA caule erecto, foliis scabris, trilobatis: lobis lateralibus bipartitis, medio tripartito et quinquepartito. *Hall. Hist. n.* 1071.

ALCEA major vulgaris. *Bauh. Pin.* 316. *Blackw. Herb. t.* 309. *fig. mala.*

ALCEA vulgaris. *Dod. pempt. p.* 656. *f.* 2? *Lob. ic.* 1. 655. *f.* 2?

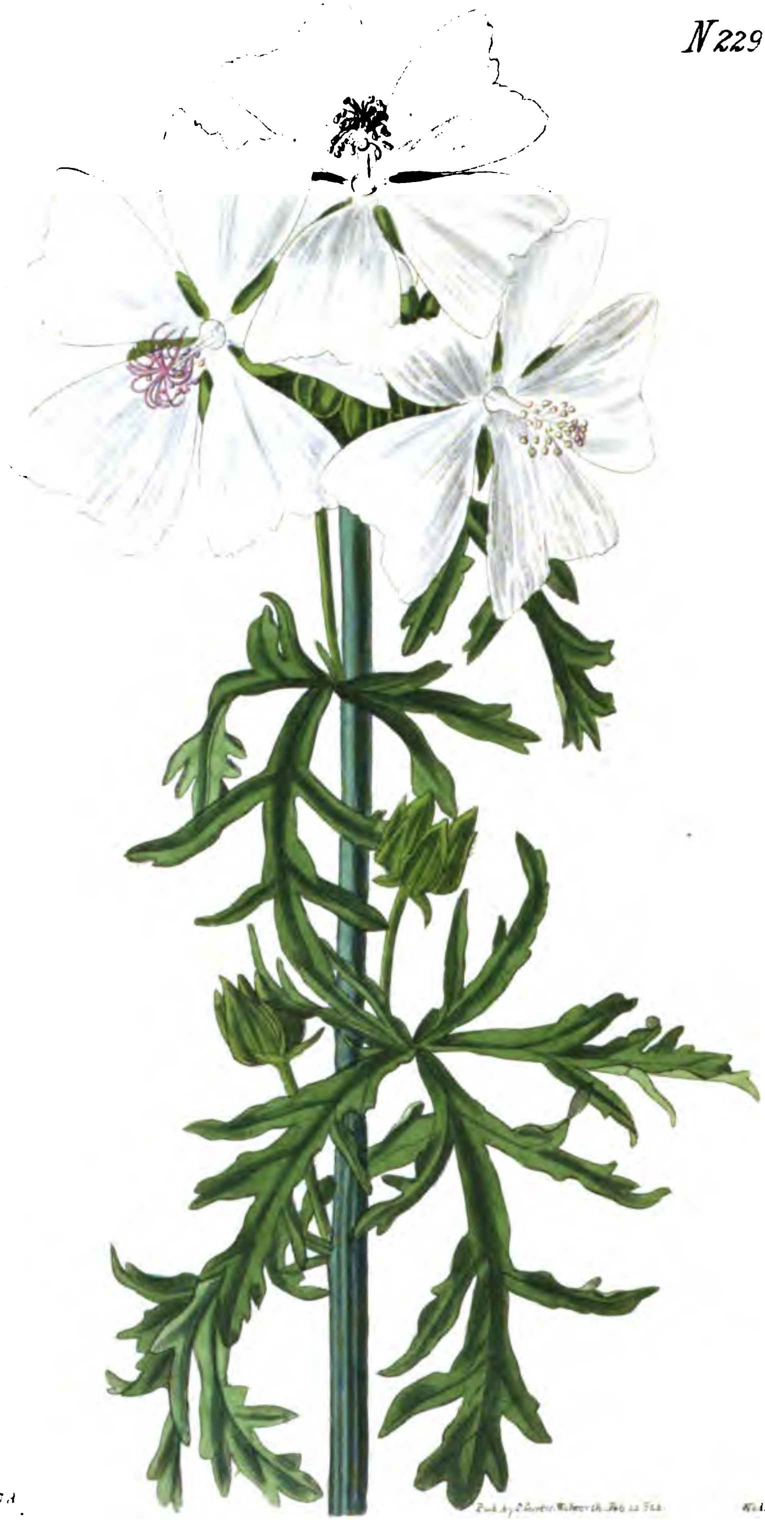
ALCEA. *Cam. Epit.* 669. *Fuchs. Hist.* 79. *t.* 80.

DESCR. *Stems* erect, three feet high, rounded, smooth at the lower part and hairy at the upper, the hairs collected in little bundles, spreading. *Stipules* linear-lanceolate, ciliate. *Leaves* petioled, 3—5-partite: segments incised, obtuse, rugose-veined. *Peduncles* one-flowered, axillary and terminal, aggregate and solitary, somewhat hispid with fascicled hairs. *Flowers* large, rose-coloured, sweet-scented: *petals* cuneiform, deeply emarginate or lobed; lobes crenulate on the inner sides. *External calycine* leaflets three, ovate, ciliate; *internal ones* 5-cleft: *segments* delta-shaped. *Anthers* very many, white. *Stigmas* many, purple. *Capsules* many, surrounding a conical receptacle, smooth, dilated at the base: *seeds* kidney-shaped.

MALVA *Alcea* was supposed by HUDSON to have been indigenous to this country; but this has probably arisen from its having been confounded with some variety of MALVA *moschata,* and it is not now admitted into the British Flora.

A hardy perennial. Native of Germany and France. Flowers from July to October. Our drawing was taken from a plant raised at the Fulham Nursery, from seeds gathered in the Carpathian mountains by Mr. HOWE.

N 2298



J. Curtis Del.

Pub. by S. Curtis Walworth Feb 1. 1822.

Weddell sc.

(2298)

MALVA MOSCHATA. VAR. β. UNDULATA.
UNDULATED MUSK MALLOW.

Class and Order.

MONADELPHIA POLYANDRIA.

Generic Character.

Calyx duplex: exterior 3-phyllus. *Caps.* plurimæ, monospermæ.

Specific Character and Synonyms.

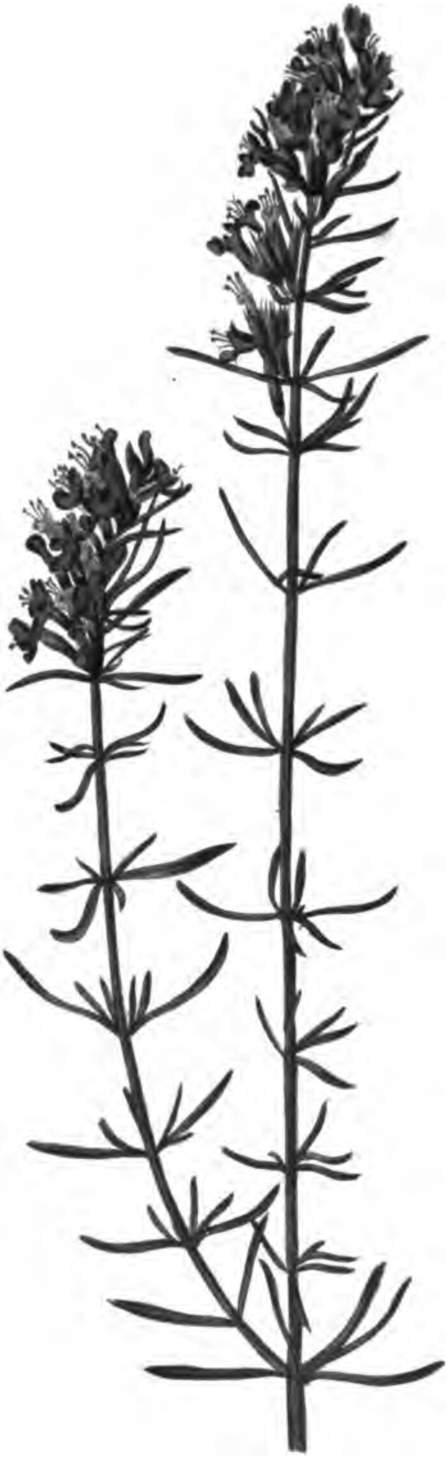
MALVA *moschata;* foliis radicalibus reniformibus incisis; caulinis quinquepartitis pinnato-multifidis, calyce piloso. *Smith. Fl. Brit.* 2. 742. *Engl. Botany,* 754.
MALVA *moschata;* caule erecto foliis radicalibus reniformibus; caulinis quinquepartitis pinnato-multifidis, calycis exterioris foliolis linearibus. *Willd. Sp. Pl.* 3. *p.* 790. *Hort. Kew. ed. alt.* 4. *p.* 217.
MALVA moschata. *Lin. Sp. Pl.* 971. *Flor. Dan.* 905. *Curtis Fl. Lond. Cavan. Diss.* 2. *p.* 76. *t.* 18. *f.* 1.
MALVA sive ALCEA montana. *Column. Ecphr.* 147.
ALCEA tenuifolia crispa. *Bauh. Hist.* 2. *p.* 1067.
(β.) *foliis atro-viridibus: laciniis undulatis.*
MALVA laciniata, β. *Lam. Encycl.* 3. *p.* 750?

MALVA *moschata* varies so much in the form, colour, and degree of hariness of the leaves, that it is not easy to describe them. Though supposed by LAMARCK to be only a variety of MALVA *Alcea,* these plants are undoubtedly distinct species; *moschata* is of humbler growth, the leaflets of the outer calyx are linear-lanceolate, not ovate; the capsules are pubescent; the hairs of the stem and calyx are erect, simple, growing from a tubercle, frequently, but not in our specimen, of a red colour; in *Alcea* the hairs grow in fascicles and spread into rays; the musk scent is also wanting in the latter; the shape of the petals is also different, being much deeper divided at the apex in *alcea*, more truncate in *moschata*.

Our plant which appears to differ in nothing from **Malva** *moschata*, but in the darker green colour, and more undulated or crisped appearance of the leaves, and larger stature, circumstances arising probably from cultivation. It possesses in a high degree the delicate scent of musk, which is given out by the leaves and especially by the calyxes, not by the flowers as is usually said; and is best perceived by drawing the plant through the hand.

A hardy perennial. Communicated by Messrs. Whitley, Brame, and Milne, from the Fulham Nursery.

N.2299.



Del. Pub by S. Curtis. Walworth. Dec. [illegible] Weddell sc.

(2299)

HYSSOPUS ORIENTALIS, β. ORIENTAL HYSSOP.

* * *

Class and Order.

DIDYNAMIA GYMNOSPERMIA.

Generic Character.

Cor. labium inferius tripartitum: lacinula intermedia subcrenata. *Stam.* recta, distantia.

Specific Character and Synonyms.

HYSSOPUS *orientalis;* verticillis subsexfloris racemosis secundis, tubo corollæ calyce longiore, foliis linearibus.

HYSSOPUS *orientalis;* floribus verticillatis racemosis secundis, calycis dentibus patulis inæqualibus, lacinia corollæ intermedia biloba integerrima, foliis lineari-lanceolatis. *Willd. Enum. p.* 599. *Flor. Taur. Caucas.* 3. *p.* 389.

HYSSOPUS *orientalis;* floribus axillaribus longe pedunculatis secundis binis ternisve, lacinia corollæ intermedia reniformi integra, foliis inferioribus lanceolatis dentatis; superioribus linearibus, omnibus punctatis carnosis, *Schultes obs. p.* 105.

HYSSOPUS *angustifolius;* verticillis sexfloris recemosis secundis, lacinia corollæ intermedia triloba integerrima, foliis linearibus. *Flora Taurico-Caucas.* 2. *p.* 38.

(β.) *caule foliisque glabris.*

HYSSOPUS *orientalis* is very nearly allied to *officinalis*, being chiefly distinguished by its linear leaves, and longer tube of the corolla. In our plant, the deep red calyx contrasted with the blue corolla was very remarkable; but this character does not appear to be constant.

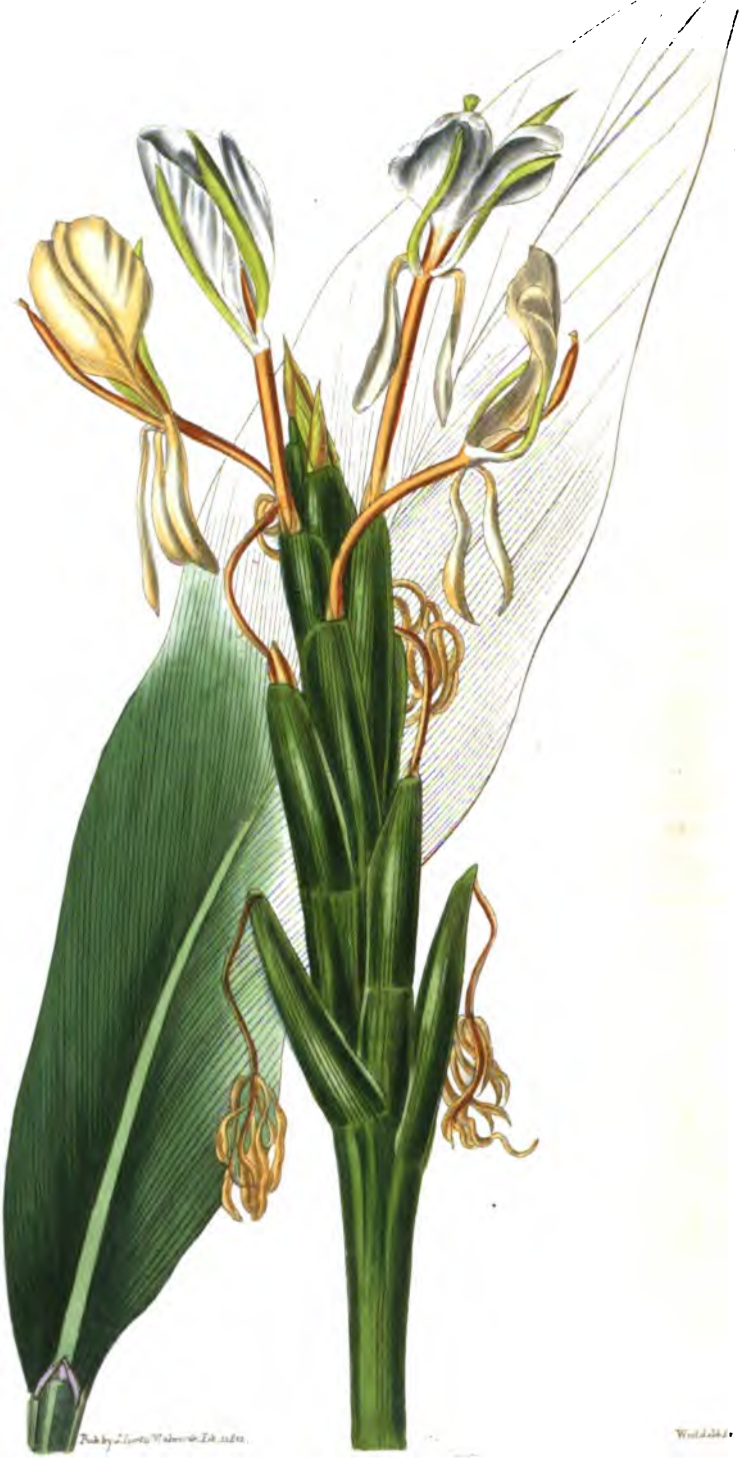
By favour of our friend Mr. ROBERT BROWN we have had an opportunity of examining an original specimen from Mr. ADAMS, preserved in the Banksian Herbarium, which

does not appear to differ from ours, except in being generally covered with a hoary pubescence, the want of which may be attributed to the effect of cultivation.

HYSSOPUS *angustifolius* of MARSCHALL van BIEBERSTEIN is the same species; but having been called *orientalis* by ADAMS, and his name being published about the same time, and adopted by WILLDENOW, it has superseded the other.

Native of Tauria and Caucasus. Is more impatient of cold than the common Hyssop. Communicated by Mr. ANDERSON from the Chelsea Garden.

N 2300.



Pub. by S. Curtis Walworth Feb. 1. 1822.

Weddell del.

HEDYCHIUM SPICATUM. SPIKE-FLOWERED HEDYCHIUM.

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Class and Order.

MONANDRIA MONOGYNIA.

Generic Character.

Anthera duplex. *Filamentum* geniculatum extra antheram non elongatum. *Stylus* filamento duplo longior, filiformis, tenacissimus, in sulco antheræ receptus.

Specific Character.

HEDYCHIUM *spicatum;* spathis truncatis unifloris, laciniis corollæ externis linearibus; labello suborbiculato bilobo stylo longiore.

DESC. *Spike* terminal, simple. *Spathe* erect, one-flowered, two-valved: outer valve truncate, green, entirely concealing the inner lesser one. *Germen* sessile, three-celled: *ovules* several, globular, shining. *Tube* of the corolla extending an inch beyond the spathe, filiform: the three external *laciniæ* equal, linear: the two internal lanceolate: *labellum* erect, suborbicular, two-lobed, with the lobes emarginate. *Anther* oblong, embracing the style: *stigma* produced beyond the anther, funnel-shaped, hairy within.

Roots of this undescribed species of HEDYCHIUM were sent by Dr. WALLICH of Calcutta, to our friend Mr. KENT of Clapton in 1820, under the name which we have adopted. One of them was planted in the open border in the front of the stove and another in the front of the greenhouse; both these stood the winter and made stronger plants than what were housed, the former produced flowers in October 1821, from which our drawing was made.

Native of Napaul, and being sufficiently hardy to bear the cold of our ordinary winters, promises to be an acquisition to our gardens, though less ornamental than some of the tenderer kinds.

N 2301.

Weddell Sc.

CRINUM ENSIFOLIUM. SWORD-LEAVED CRINUM.

****

Class and Order.

HEXANDRIA MONOGYNIA.

Generic Character.—Vide No. 2292.

Specific Character and Synonyms.

Sect. 1. PATENTES. *Subdiv.* nutantes.

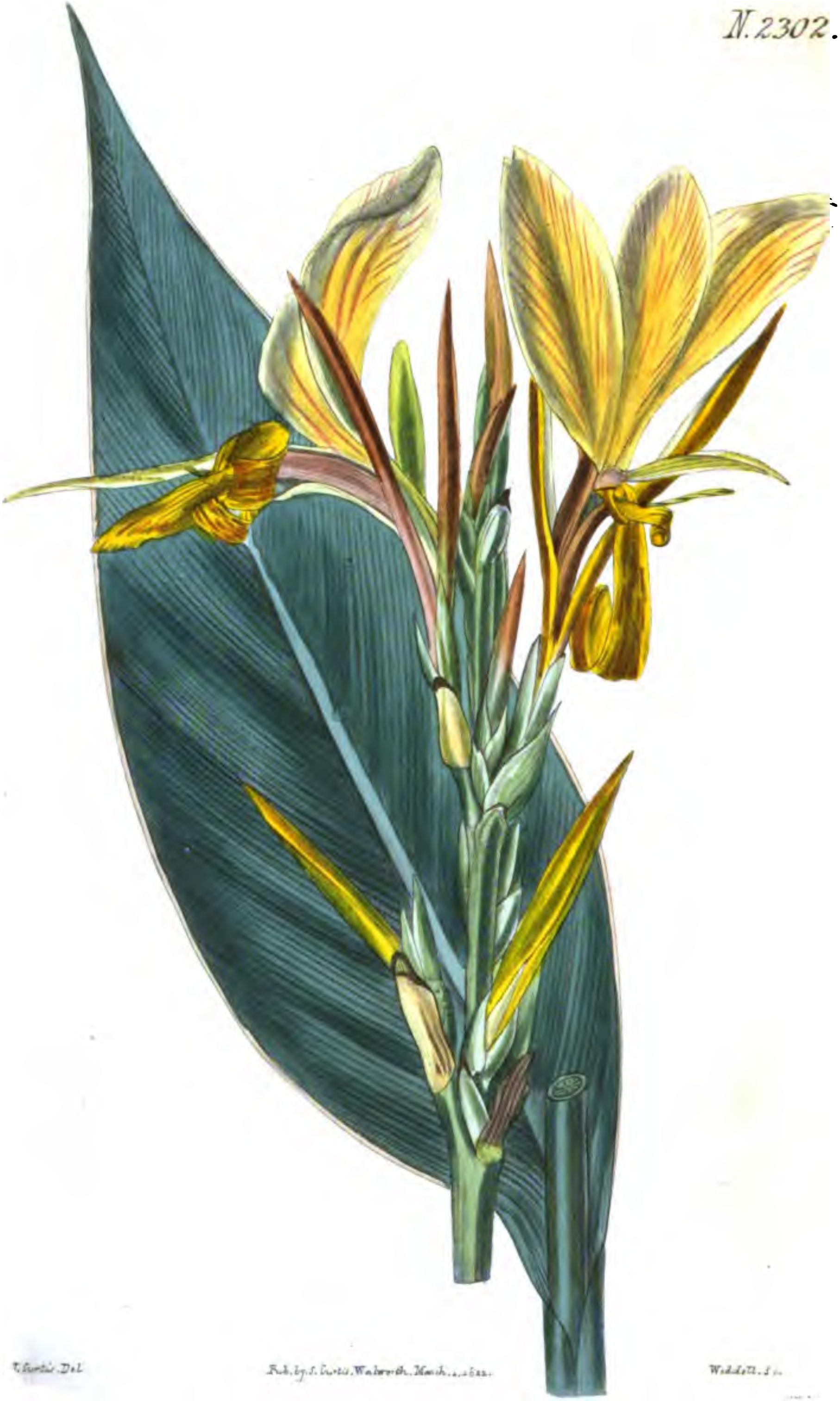
CRINUM *ensifolium;* bulbo ovato stolonifero, foliis suberectis angustis acutis, scapo purpureo, floribus patentibus 5—6, limbo albo extùs purpurascente, tubo purpureo, germine subsessili purpureo, loculis dispermis.

CRINUM ensifolium. *Roxburg. Hort. Beng. Ker. Journ. Sc. et A. Nobis supra* 2231, *in specierum enumeratione et in appendice p.* 22.

DESC. *Bulb* green, ovate, stoloniferous. *Leaves* nearly erect, narrow, acute, an inch wide, sometimes about three feet long. *Scape* purple. *Flowers* five or six, patent, fragrant. *Limb* white, near four inches long, narrow, the outer petals purplish without. *Tube* purple, four inches long. *Germ* subsessile, purple. *Cells* with two ovules. This species is a native of Pegu, and closely allied to C. *Defixum,* from which it may be however easily distinguished by the point of its leaves being less erect and more acute. It is a smaller and much more delicate plant than *Defixum,* requiring a stronger heat and less water, the lower part of the bulb being very liable to be injured by too much wet. It encreases fast by stolones, but does not flower so freely as C. *Defixum.*

Flowered at Spofforth in April 1821 as is supposed for the first time in Europe. *W. H.*

N. 2302.



J. Curtis Del. Pub. by S. Curtis, Walworth, March 1, 1822. Weddell Sc.

CANNA GLAUCA, β. RUFA. BUFF-COLOURED GLAUCOUS-LEAVED INDIAN REED.

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Class and Order.

MONANDRIA MONOGYNIA.

Generic Character.

Anthera simplex, filamenti margini adnata. *Stylus* crassus, claviformis. *Stigma* obtusum. *Caps*. 3-locularis. *Sem*. globosa numerosa.

Specific Character and Synonyms.

CANNA *glauca;* foliis glaucis laciniis interioribus tribus erectis ovatis strictis, labello revoluto.

CANNA *glauca;* corollæ limbo interiore trifido: laciniis ovatis strictis, nectario trilobato fimbriato. *Roscoe in Lin. Soc. Trans*. 8. *p*. 339. *Hort. Kew. ed. alt*. 1. *p*. 2.

CANNA *glauca;* foliis petiolatis lanceolatis glaucis subtus enervibus. *Willd. Sp. Pl*. 1. *p*. 4. Excluso synonymo Dillenii.

CANNA *glauca;* foliis elliptico-lanceolatis glaucis, laciniis corollæ exterioribus erectis, labio superiore trilobato lobis tribus ovatis strictis; inferiore indiviso recurvo. *Exot. Bot. p*. 83. *t*. 102. ex anglico versum.

(β.) rufa; *Corollis rubro tinctis: labello variegato integerrimo.*

Mr. ROBERT BROWN has very properly separated the CANNEÆ from the SCITAMINEÆ of LINNÆUS, an order retained by JUSSIEU under the name of CANNÆ. See *Prodromus Floræ Novæ Hollandiæ, p. 307*.

The character of CANNA has been considered differently by different botanists. The flower is furnished with a real persistent superior *calyx* distinct from the *corolla*, which latter JUSSIEU denominates calyx, consequently according to him it has a double calyx. The *corolla* is monopetalous, tubular, divided, more or less deeply, into six *laciniæ*, three *exterior* generally erect, nearly equal, acute, and, being frequently more or less green, resemble a calyx; three *interior* larger, often differing in size, form, and position; now straight, now recurved, and one sometimes nearly, or perhaps entirely obliterated; though some traces of it may mostly be detected by careful observation. Besides these six laciniæ there are three other petal-like appendages, smaller and narrower, one of which is the *style*, more rigid and fleshy than the others, but frequently equalling, sometimes exceeding, the others in length; the other two stand opposed to each other; the upper one, which bears the exhausted *anther* on its margin, is denominated *filament*, the lower one generally revolute, and often of a different colour, the *labellum;* these two form the *nectarium* of LINNÆUS, who consequently describes the anther as inserted in the margin of the nectarium without filament. But the filament and style are so changed at the time of the expansion of the flower, that their real nature cannot be understood without examining them at a much earlier stage, as explained at No. 2085.

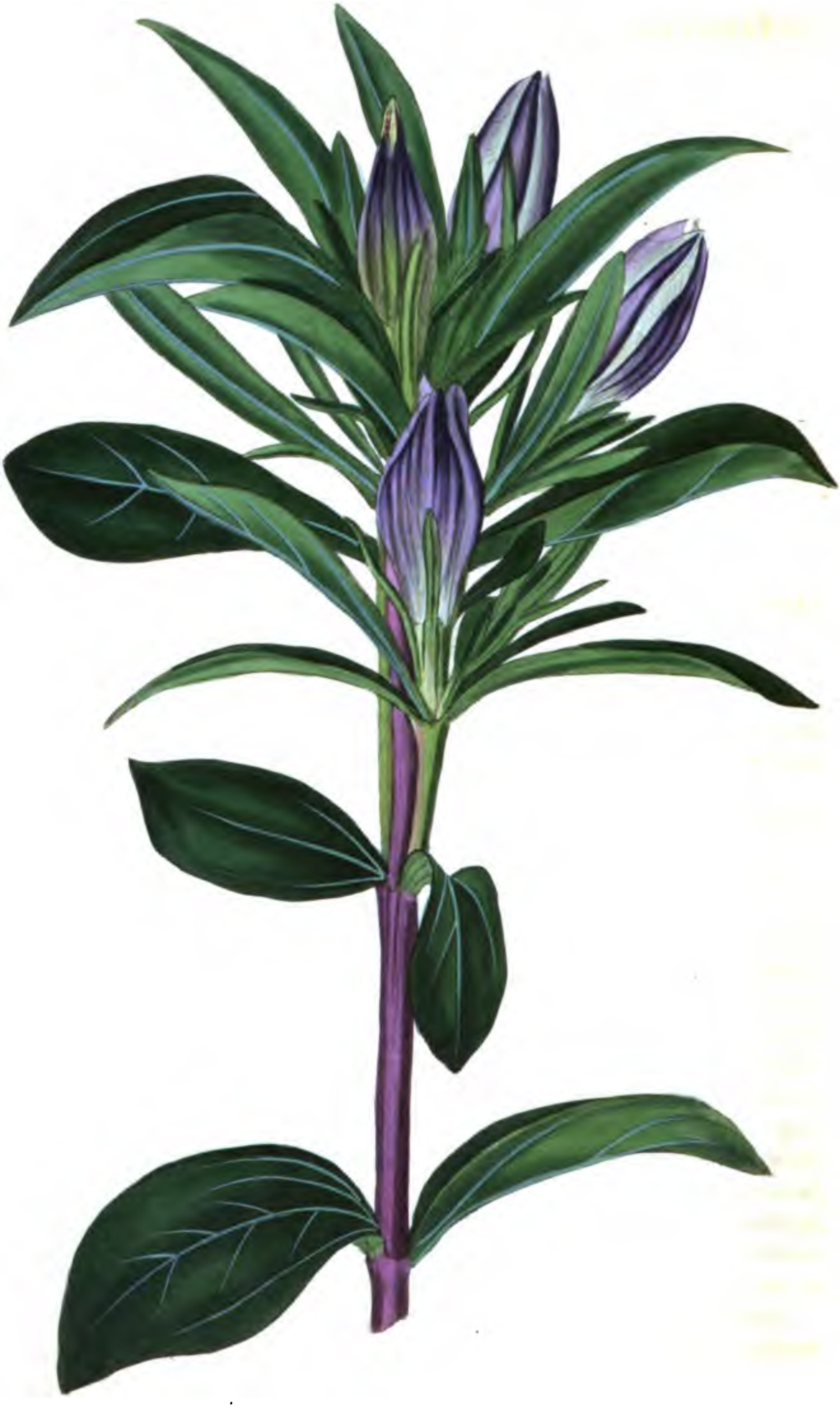
The COROLLA of our variety of CANNA *glauca* has its limb divided into three *exterior laciniæ,* erect, lanceolate, acute; and three *interior,* ovate, nearly equal, all erect; a petal-like *filament,* bearing the effete anther at the lower part of its margin, and becoming revolute above; opposed to this the *labellum,* narrow, variegated, quite entire; *style* rigid, becoming much elongated and undulate.

It is doubtful whether our plant ought not rather to be considered as a distinct species than a variety; it differs from the *glauca* of Exotic Botany, not only in the colour of the flower, which in that is a plain yellow without intermixture, but in the upright internal laciniæ being narrower, more pointed, and sometimes a little notched; in the labellum being, in our individual at least, quite entire, not emarginate at the extremity.

Native of South America; Mr. ANDERSON has received it from the Caraccas and from St. Vincent's. The figure referred to in the Hortus Kewensis, as authority for its having been cultivated by Dr. SHERARD, belongs to CANNA *flaccida*.

Communicated last October by our friend JOHN WALKER, Esq. of Arno's Grove, Southgate, who raised it from seed several years ago.

N.2303.



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(2303)

GENTIANA INTERMEDIA. INTERMEDIATE GENTIAN.

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Class and Order.

PENTANDRIA DIGYNIA.

Generic Character.

Cor. 1-petala. *Caps*. 2-valvis, 1-locularis: Receptaculis 2, longitudinalibus.

Specific Character and Synonyms.

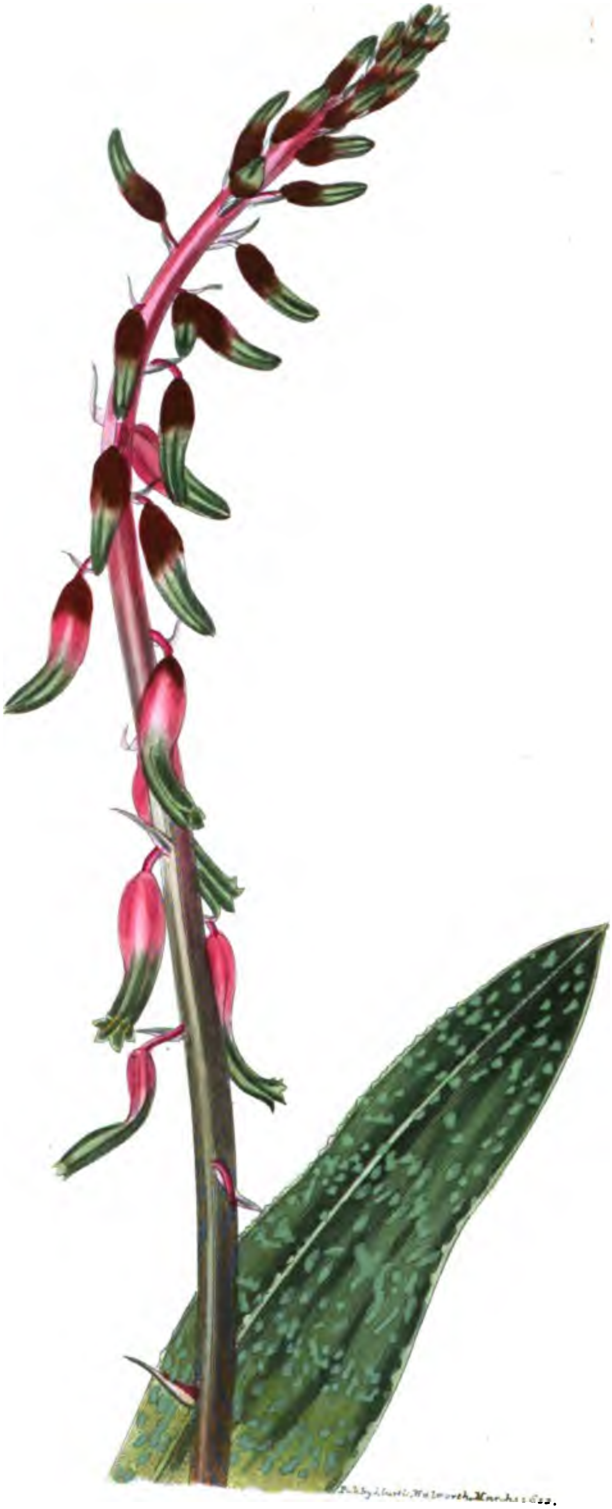
GENTIANA *intermedia;* foliis obovato-oblongis trinerviis, floribus terminalibus aggregatis, calycibus foliaceis inæqualibus, corollis ventricosis quinquefidis inapertis: plicis interioribus subsimplicibus.
GENTIANA ochroleuca. *Pursh Fl. Amer. Sept.* 1. *p*. 185 ?
GENTIANA Saponaria. *Michaux Flor. Bor. Amer.* 1. *p*. 176?

DESCR. Whole plant quite smooth. *Leaves* oblong-obovate, quite entire, obsoletely 3-nerved. *Flowers* in a terminal few-flowered head, and lateral on very short branches bearing from one to three flowers, but never truly verticillate. *Calyx* five-cleft: segments very unequal, foliaceous, one sometimes even longer than the corolla. *Corolla* barrel-shaped, segments acute: inner folds simple or sometimes bifid. Colour externally whitish-green, changing more or less to violet, internally streaked with violet. *Stamens* and *germen* only half the length of the corolla: *filaments* two-edged: *anthers* distinct. *Stigmas* finally spreading and revolute. Both calyx and corolla are now and then six-cleft. The taste of the leaves is bitter like most or all of the genus.

GENTIANA *Saponaria, Catesbæi, ochroleuca,* and *intermedia* have a very near affinity, and yet all have some points of difference, perhaps sufficient to keep them specifically distinct. They all have ventricose or barrel-shaped flowers which continue closed; the internal plicæ of *Saponaria* are fimbriated, of *ochroleuca* and *intermedia* nearly or quite simple; the flowers in *Saponaria* and especially in *Catesbæi* (if these plants are really distinct) are more verticillate, in *ochroleuca* more crowded at the extremity of the stalk; in *intermedia* the flowers are altogether terminal, the lateral ones being never truly axillary, but supported on short leafy branches; the leaves in the latter are broader towards the point than in either of the others.

For this, as we believe, unrecorded species, we are indebted to Mr. Joseph Knight of the King's Road, who received the roots from North America in the spring of 1820; he supposes it to be a native of Virginia. A hardy perennial. Flowers in October.

N.2304.



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Pub. by S. Curtis, Walworth, March 1 1822.

Weddell Sc.

ALÖE NITIDA. POLISHED ALÖE.

****

Class and Order.

HEXANDRIA MONOGYNIA.

Generic Character.—Vide No. 1352.

Specific Character and Synonym.

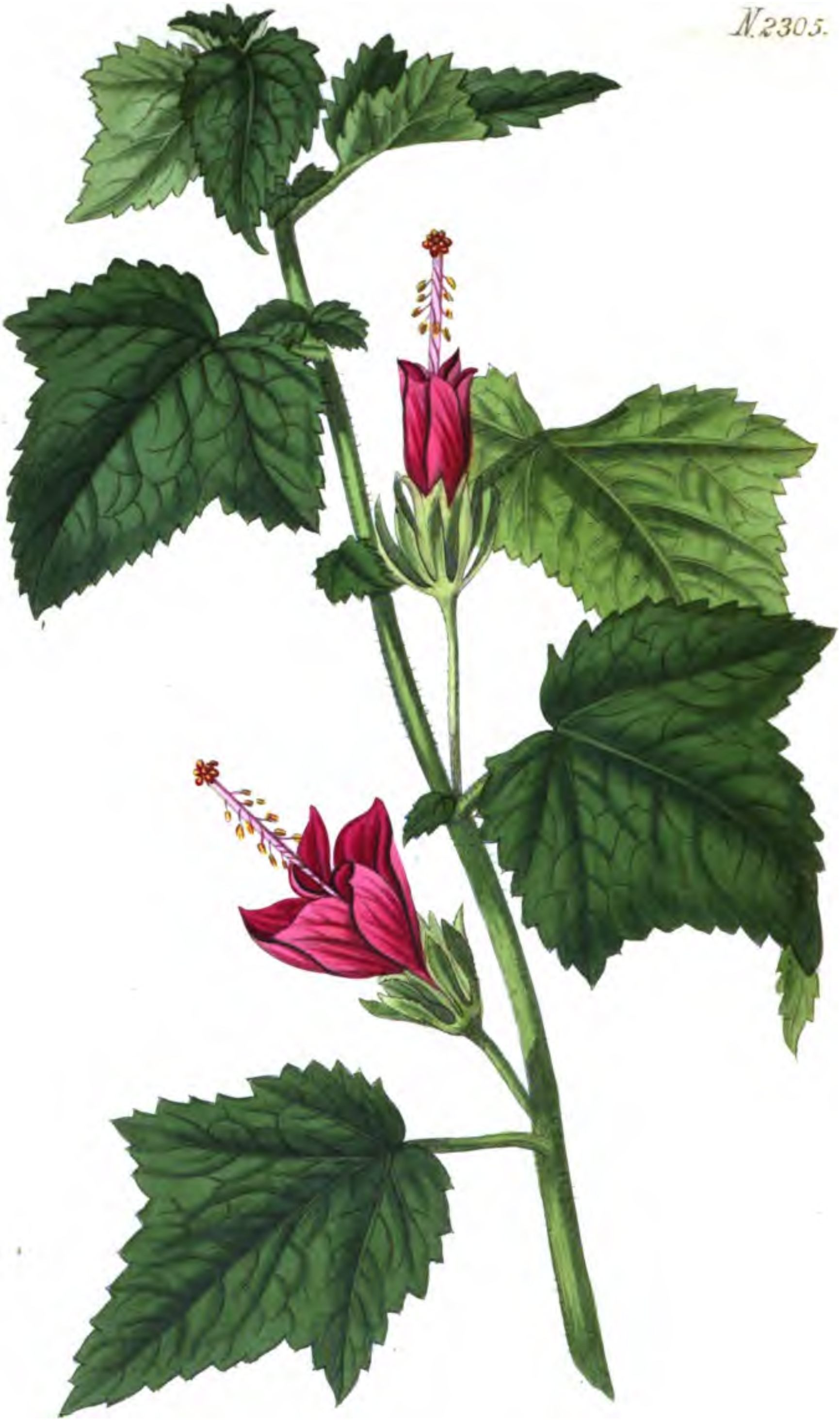
SECT. *Curvifloræ.* Gasteria. HAW.

ALÖE *nitida;* acaulis, foliis erecto-patulis multifariis subtriquetris mucronatis albido-maculatis nitidissimis, scapo simplici, bracteis assurgentibus.

ALÖE *nitida;* foliis erecto-patulis, latis, multifariis, supra excavatis, subtus alte carinatis, apice acutis; atroviridibus, obsolete albido-maculatis, glaberrimis, nitidis; marginibus cartilagineis integerrimis. *Prince de Salm Dyck Catal. raisonée. n.* 33.

DESC. *Leaves* about nine, between erect and spreading, surrounding the root in all directions, fleshy, unequally three-sided, lower side unequally convex, upper concave, a third narrower and flat, dotted with small, linear, frequently confluent spots: angles cartilagineous, slightly tubercular, sharp-pointed with a subpungent mucro; when old they shine like polished marble. *Scape* erect, a foot and half in length, compressed towards the base, rounded at the upper part. *Flowers* curved, swelled at the base, contracted upwards very like those of *carinata,* (No. 1331) and Lingua (1322). Indeed the whole section of *Curvifloræ,* which form the genus GASTERIA of HAWORTH's supplement, hardly afford any distinguishing characters in either the form or colour of the corolla. The flowers are sweet-scented something like the Hyacinth. The taste of the leaves is mild without acrimony or bitterness.

The specimen from which our drawing was taken was sent us in March last, by Mr. THOMAS HITCHIN of Norwich, who received it from the Prince of SALM DYCK, with whom it had not blossomed at the time of the publication of his Catalogue. It was raised from Cape seeds at Utrecht and communicated to the Prince by M. VAN MARUM.



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ACHANIA MALVAVISCUS. SCARLET ACHANIA.

****

Class and Order.

MONADELPHIA POLYANDRIA.

Generic Character.

Cal. duplex: exterior polyphyllus. *Cor.* convoluto-clausa. *Stigmata* 10. *Bacca* 5-locularis, 5-sperma.

Specific Character and Synonyms.

ACHANIA *Malvaviscus;* foliis scabriusculis, acuminatis, foliolis calycis externis erectis. *Willd. Sp. Pl.* 3. *p.* 839. *Hort. Kew. ed. alt.* 4. *p.* 233.
HIBISCUS *Malvaviscus;* foliis cordatis crenatis, angulis lateribus extimis parvis, caule arboreo. *Sp. Pl.* 978. *Kniph. Cent.* 1. *n.* 31. *Swartz. Fl. Ind. occid. p.* 1222.
HIBISCUS frutescens, foliis angulatis cordatis acuminatis, petalis ab uno latere auritis. *Brown Jam. p.* 284.
MALVAVISCUS arborescens flore miniato clauso. *Dill. Elth.* 210. *t.* 170. *f.* 208.
MALVAVISCUS arborea. *Cav. Diss.* 3. *p.* 131. *t.* 48. *f.* 1. *Lam. Encycl.* 4. *p.* 1.
MALVA arborea, folio oblongo acuminato glabro dentato. *Sloane Hist.* 1. *p.* 216. *t.* 136. *f.* 1.
ALCEA indica arborea, folio molli flore amplo eleganter coccineo. *Pluk. Alm. p.* 14. *t.* 257. *f.* 1. quoad figuram.

DESCR. A tall *shrub* with alternate, three-lobed, acuminate *leaves*, serrate, roughish: petioles recurved. *Peduncles* axillary, solitary, one-flowered. External *calyx* of several leaflets linear, erect; internal of one leaflet with a five-cleft border. *Corolla* of five *petals*, obovate, convolute, never fully expanding. Column of *stamens* and *styles* twisted, twice the length of the corolla; *anthers* pendulous, scattered along the column; *stigmas* recurved.

Native of Jamaica. With us an inhabitant of the stove, where its handsome foliage and bright scarlet flowers produced most part of the year, render it very ornamental. Cultivated in 1714, by the Duchess of BEAUFORT. Communicated by Mr. BLAKE from the collection of JAMES VERE, Esq.

N.2306.

CACTUS SPECIOSISSIMUS. CRIMSON-FLOWERED TORCH-THISTLE.

****

Class and Order.

ICOSANDRIA MONOGYNIA.

Generic Character.

Cal. 1-phyllus, superus, imbricatus. *Cor.* multiplex. *Bacca* 1-locularis, polysperma.

Specific Character and Synonyms.

Sect. III. CEREI, *stantes per se.*

CACTUS *speciosissimus*; caule erecto 3—4-gono: angulis dentatis, flore campanulato patente, genitalibus declinatis, stigmatibus decem geminatis. *Desfontaines in Mem du Mus. d'hist. nat.* 3. *p.* 190. *t.* 9. *Bot. Reg.* 486.

CACTUS *speciosus*; erectus, leviter quadrangularis, angulis dentatis. *Willd. Enum. suppl. p.* 31.

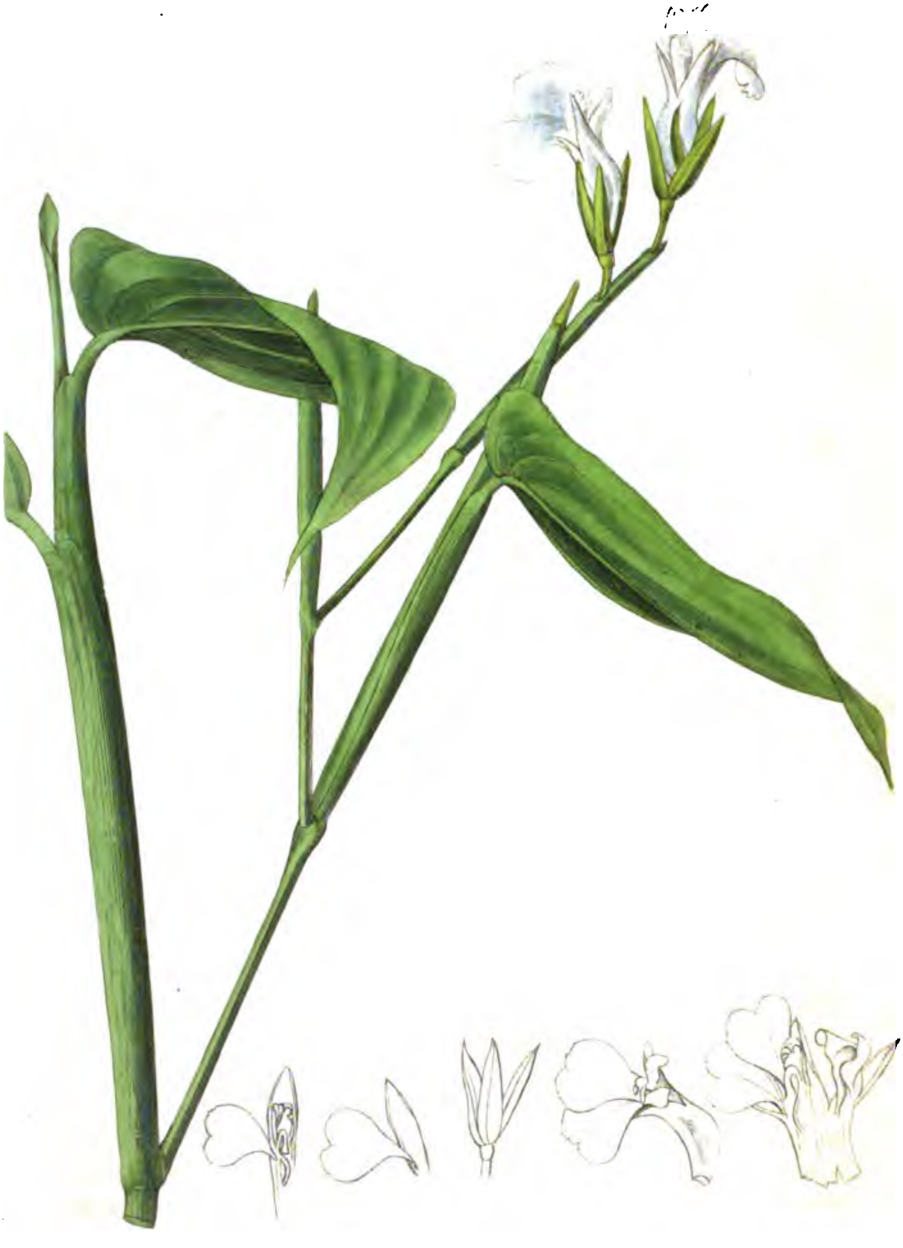
The late Professor WILLDENOW, in a supplement to his Enumeration of the plants of the Berlin garden, has divided the genus CACTUS into eight sections, viz. ECHINOCACTI, Hedgehog or Mammilary Thistles. 2. MELOCACTI, Melon Thistles. 3. CEREI, Torch Thistles. 4. CEREI REPENTES, Creeping Cereuses. 5. RHIPSALIDES, Pendulous Cereuses. 6. OPUNTIÆ, Indian-Figs. 7. PHYLLANTHI, Spleenwort-like Indian-Figs. 8. PERESKIÆ, Barbadoes-Gooseberry. These sections have by some botanists been separated into nearly as many genera; Mr. HAWORTH makes seven distinct genera, retaining the name of CACTUS for the second of the above sections only, and uniting the third and fourth under that of Cereus. To the first section he gives the name of Mammilaria, and to the seventh that of Epiphyllum, Phyllanthus being already occupied. His other genera all retain the names given to the different sections.

Cactus *speciosissimus*, belongs to the third section. This plant having been already published under this name in the Memoires of the museum of Natural History and in the Botanical Register, we adopt it to prevent confusion, though that of *speciosus* has the right of priority. The *speciosus* of M. Bonpland was first described and accurately characterized by M. De Candolle under the name of *phyllanthoides*, (vide supra n. 2092.)

Native of South America. Requires to be kept in the dry stove and treated as other tender succulents.

Introduced from Paris by the Count De Vandes, in whose collection at Bayeswater, the plant from which our drawing was taken flowered in great perfection, in July last, as it had done the preceding year. The gardener remarked that the red streak to be seen in our drawing below the flower-bud, constantly denoted the tubercles from which the flowers would proceed, and this some time before the appearance of the bud.

N.2307.



W.Hook ad.Del. Pub. by S. Curtis Walworth April.1.1822. Weddell Sc.

MARANTA ARUNDINACEA. INDIAN ARROW-ROOT.

****

Class and Order.

MONANDRIA MONOGYNIA.

Generic Character.

Anthera simplex, filamento adnata. *Stylus* petaliformis. *Stigma* subtrigonum. *Sem.* 1.

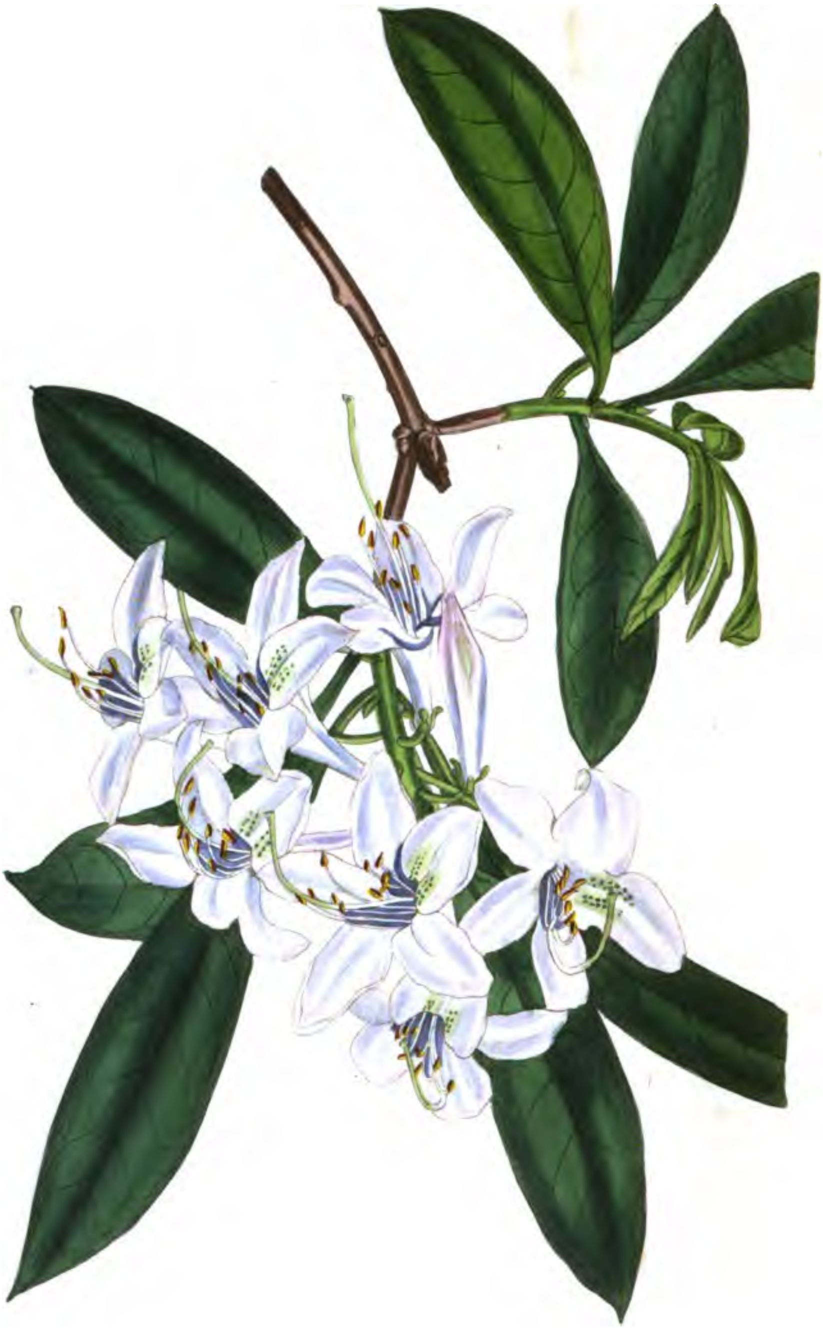
Specific Character and Synonyms.

MARANTA *arundinacea;* culmo ramoso herbaceo, foliis ovato-lanceolatis subtus pilosiusculis. *Roscoe in Lin. Soc. Trans.* 8. *p.* 339. *Willd. Sp. Pl.* 1. *p.* 13. *Hort. Kew. ed. alt.* 1. *p.* 2.
MARANTA arundinacea; *Swartz. obs. p.* 8. *Redouté Lil.* 57.
MARANTA *arundinacea;* culmo ramoso, corollis sexpartitis, pericarpiis monospermis. *Lam. Encycl.* 2. *p.* 588.
MARANTA arundinacea Cannacori folio. *Plum. Gen.* 16. *Mart. Cent.* 39. *t.* 39.
CANNA indica radice alba alexipharmaca. *Sloane Hist.* 1. *p.* 253. *t.* 149. *nil præter folium. Raj. Hist.* 3. *p.* 573.
CANNA indica, angustifolia pediculis longis ad imum folium nodo singulari geniculato. *Pluk. Alm.* 79.

The genus MARANTA belongs to the natural order of *Canneæ* of BROWN, as distinguished from the *Scitamineæ*. The present species is a plant of considerable interest, the elegant article of diet, sold under the name of Indian Arrowroot, being prepared from its roots, not, as has been said, by drying and pounding, but by maceration in water in the same manner as starch is made, from wheat, potatoes and other farinaceous substances. Great quantities of this starch have of late years been imported into this country from the West-Indies, and much recommended as food for young children, and as a light nourishment in sickness. A similar substance, probably in every respect of equal efficacy, and not less salubrious, has of late years been prepared in considerable quantities, in the isle of Portland, from the roots of the common cuckow-pint (Arum *maculatum)*.

Native of tropical South America; and cultivated in all the West-India islands. With us must be kept in the stove, where it produces its very fugitive blossoms in July and August. Introduced by Dr. William Houston before 1732. Communicated by the Hon. and Rev. William Herbert.

N.2308.



Curtis Del.

Pub. by S. Curtis, Walworth April 1, 1822.

Weddell Sc.

(2308)

AZALEA HYBRIDA ENNEANDRA. HYBRID RHODODENDRON-LIKE AZALEA.

****

Class and Order.

PENTANDRIA MONOGYNIA.

Generic Character.

Cal. 5-partitus. *Cor.* infundibuliformis aut campanulata, 5-fida, inæqualis. *Stam.* 5, sub pistillo inserta. *Caps.* 5-locularis. JUSSIEU.

Specific Character and Synonym.

AZALEA *hybrida, enneandra;* floribus racemosis sub decandris, foliis perennantibus.
RHODODENDRON hybridum, enneandron. *Herbert in Trans. Horticult. Soc. v.* 3.

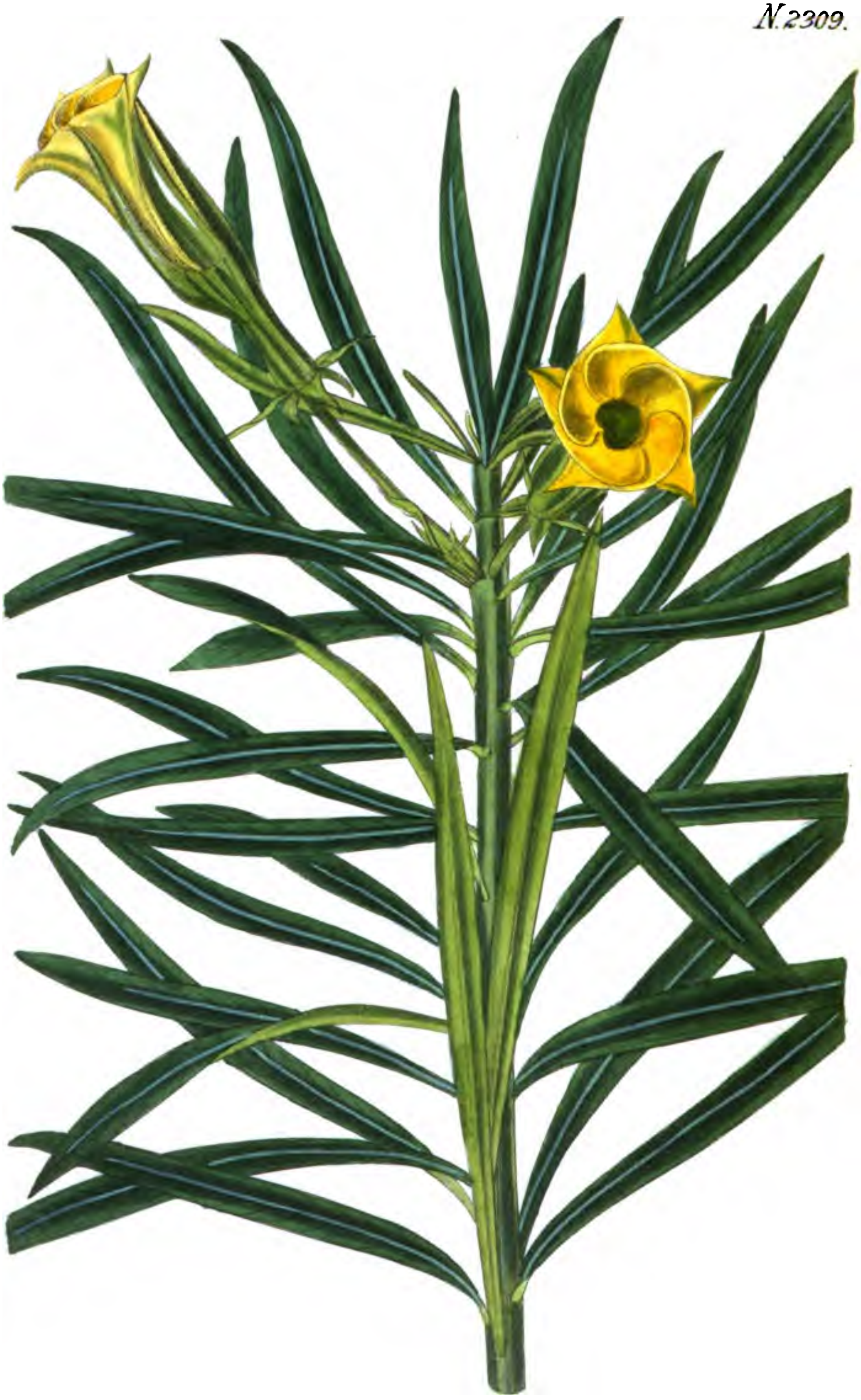
For a specimen of this charming fragrant shrub we are indebted to the Hon. and Rev. WILLIAM HERBERT, who states that it was raised from seeds of a white-flowered AZALEA accidentally fecundated by the pollen of a RHODODENDRON *ponticum* which stood near it. Which is the more probable as the American Azaleas, Mr. HERBERT observes, rarely produce seed with us, from the want of pollen. It is a low shrub, with many slender weak branches, produces abundance of flowers during the summer months, which are very fragrant. Leaves evergreen, a little variegated with yellow. RHODODENDRON *hybridum glaucum* of Mr. HERBERT figured in the Botanical Register No. 195, the product of 5 an AZALEA fecundated by the pollen of RHODODENDRON *maximum,* differs from our plant in having glaucous leaves, and an erect, more arborescent stem. We have received specimens under the name of Rhod. *azaleoides,* supposed to be mule products of AZALEA and RHODODENDRON from

Messrs. Loddiges and Sons, Messrs. Chandler and Buckingham, and from Mr. Thompson of Mile-End. The latter nurseryman has four varieties, all raised from seeds of an Azalea, one of which is very fragrant.

Though these mules have generally gone by the name of Rhododendra because they have more than five, generally ten, stamens, yet we cannot think it right to change the generic name from that of the mother plant; of which it is possible, though perhaps not probable, that it may be a mere seminal variety, when we consider the long list of varieties, all supposed to owe their origin to Azalea *nudiflora;* some of which scarcely differ less from one another than our plant from some of them. The two genera indeed, though widely separated in the artificial system of Linnæus, on account of the difference in the number of their stamens, are apparently one in nature.

This is a hardy evergreen shrub, well worthy of cultivation, both on account of its beauty and fragrance.

N. 2309.



[illegible] del.

Pub. by S. Curtis Walworth Apr. 1. 1822.

Weddell Sc.

CERBERA THEVETIA. LINEAR-LEAVED CERBERA.

****

Class and Order.

PENTANDRIA MONOGYNIA.

Generic Character.

Contorta. *Drupa* monosperma.

Specific Character and Synonyms.

CERBERA *Thevetia;* foliis linearibus longissimis confertis. *Sp. Pl.* 304. *Willd.* 1. 1223. *Hort. Kew. ed. alt.* 2. *p.* 66. *Jacq. Amer.* 48. *t* 34. *Swartz obs.* 102.

CERBERA *Thevetia;* foliis linearibus longissimis confertis, floribus subsolitariis axillaribus elongatis. *Poirét Encycl. suppl.* 1. *p.* 261.

AHOVAI Nerii folio, flore luteo. *Plum. Cat. Pl. Amer. p.* 20. *ic.* 18.

PLUMERIA arborescens, foliis lanceolatis, floribus fauce ampliatis subcampanulatis. *Brown Jam.* 181.

NERIO affinis angustifolia lactescens, flore luteo. *Pluk. Alm.* 263. *t.* 207. *f.* 3.

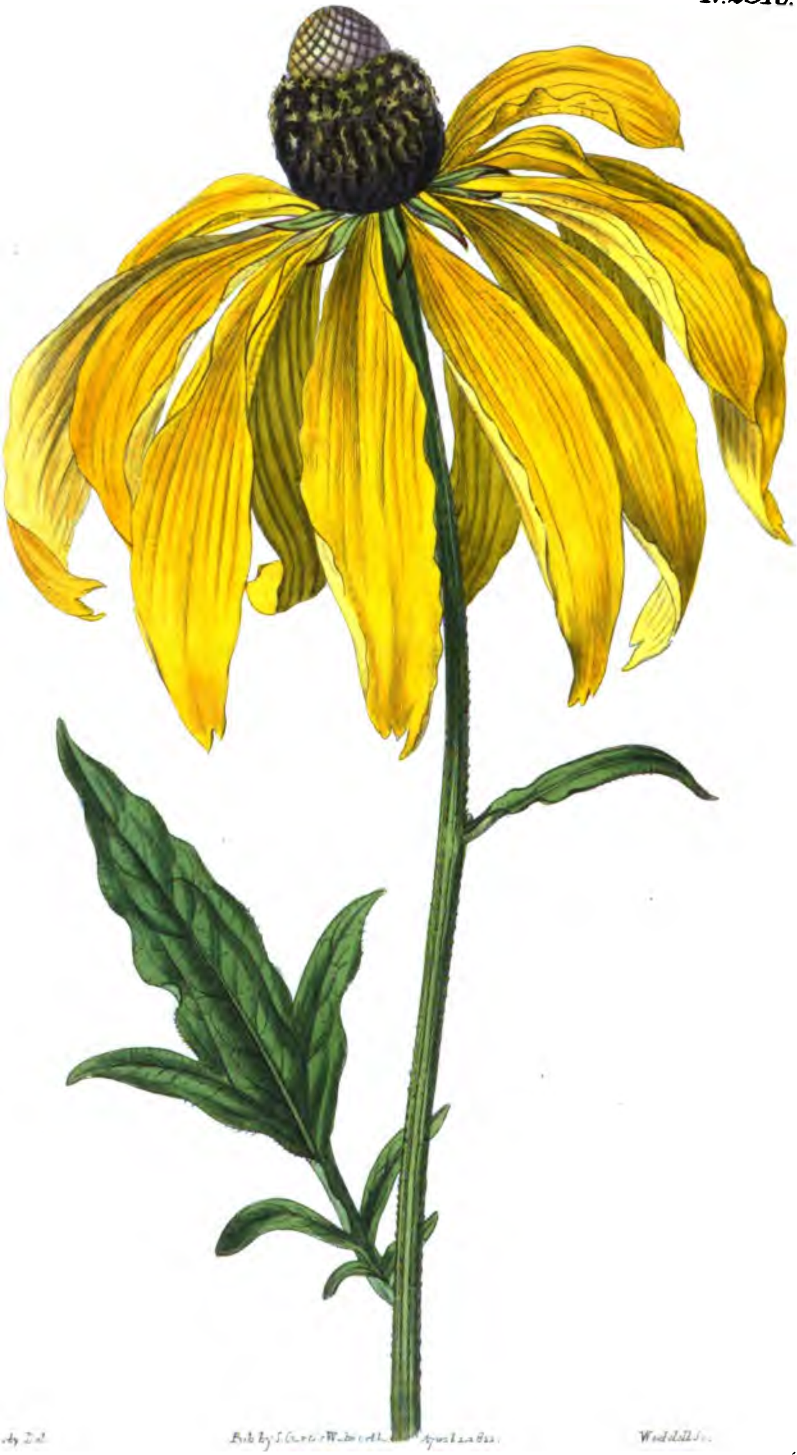
AHOAY-MIRI. *Piso. Bras. p.* 308.

YCCOTLI. *Hernand. Mex.* 443.

CERBERA *Thevetia* is a native of the West Indies, where it is said to grow into a handsome tree, from twelve to fifteen feet in height; the branches are rounded and flexile, abounding in every part with a milky acrid juice, supposed to be of a very poisonous quality. In our stoves it forms a handsome shrub; but we believe seldom blossoms, as its time of flowering is not noted in the Hortus Kewensis, nor in SWEET's Catalogue; indeed it is far from common, and is rare even in its native country.

Communicated last October by Messrs. WHITLEY, BRAME, and MILNE.

N. 2310.



Lindley Del. Pub. by S. Curtis Walworth April 1 1822. Weddell Sc.

(2310)

RUDBECKIA PINNATA. FRAGRANT PINNATED RUDBECKIA.

****

Class and Order.

SYNGENESIA POLYGAMIA FRUSTANEA.

Generic Character.

Recept. paleaceum, conicum. *Pappus* margine 4-dentato. *Calyx* duplici ordine squamarum.

Specific Character and Synonyms.

RUDBECKIA *pinnata;* foliis omnibus pinnatis: pinna una alterave inferiorum bipartita, reliquis indivisis, pappo integerrimo, caule sulcato hispido. *Schrad. neu. journ.* 2. *p.* 61. *Willd. Enum. p.* 921. *Pursh. Fl. am. Sept.* 2. *p.* 576.

RUDBECKIA *pinnata;* foliis radicalibus pinnatis; caulinis lobatis: summis indivisis, flosculis atro-purpureis, receptaculo elongato, seminibus nudis. *Hort. Kew. ed. alt.* 5. *p.* 130. *Vent. cels.* 71.

RUDBECKIA *pinnata;* caule anguloso pubente; foliis laciniato-pinnatis; segmentis lanceolatis: disco oblongiuscule ovoideo; corollulis dentatis. *Michaux Flor. am. bor.* 2. *p.* 144.

RUDBECKIA *pinnata;* foliis scabris; inferioribus compositis; superioribus trifidis-quinquefidisve; summis indivisis. *Smith. Exot. Bot. p.* 73. *t.* 38. ex anglico versa.

ACONITUM Helianthemum Canadense. *Cornuti Canad. p.* 178. *t.* 179.

CHRYSANTHEMUM americanum majus foliis magis dissectis. *Moris. Hist.* 3. §. 6. *t.* 6. *f.* 54.

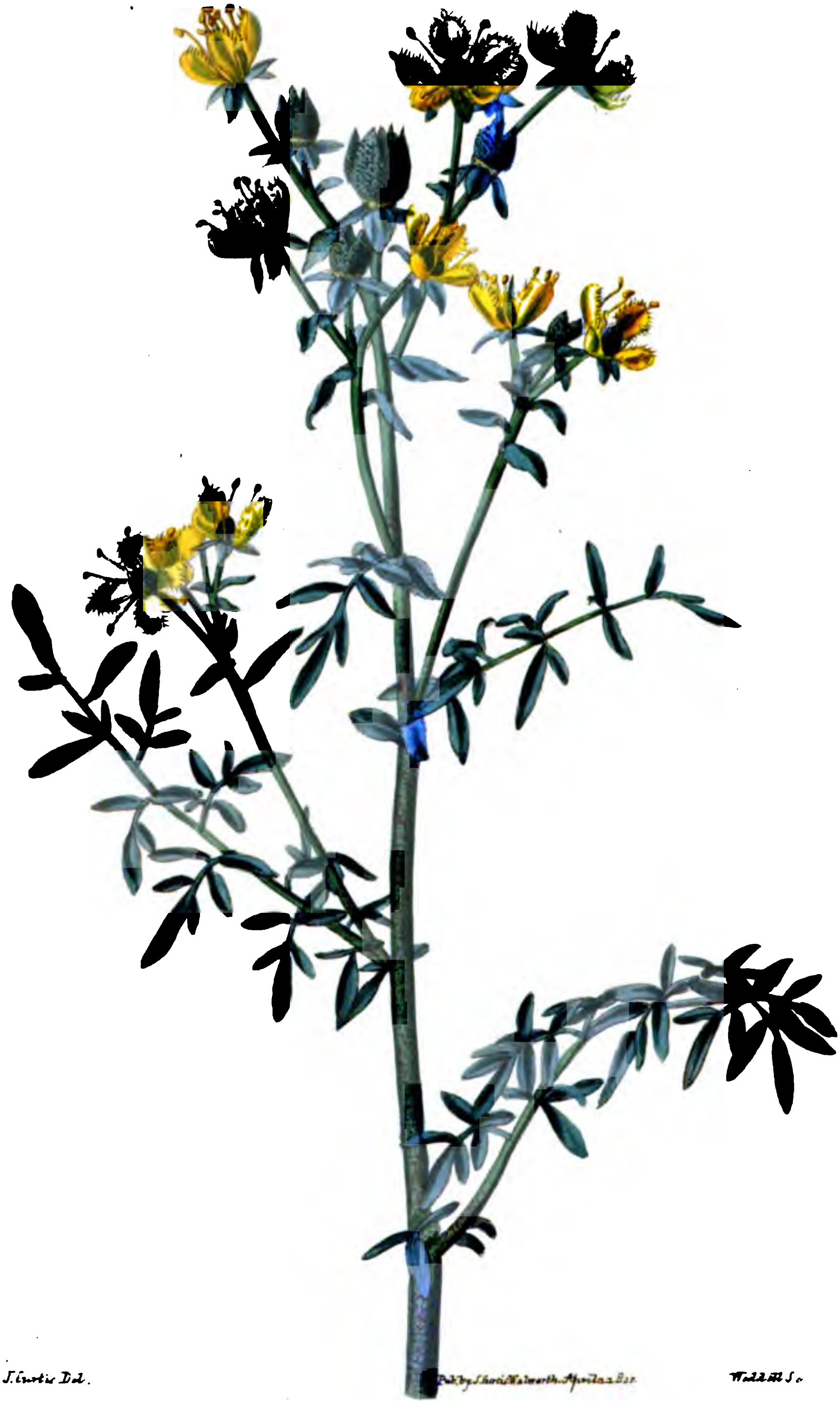
RUDBECKIA odorata. *Hortulanis.*

The synonymy of RUDBECKIA *laciniata, digita,* and *pinnata* is so confused as to be altogether inextricable; and it is very difficult to distinguish satisfactorily the different species.

cies. According to Schrader's definitions our plant, if it be one of the three, must certainly be *pinnata;* being the only one that has a sulcate hispid stalk, that of both the others being smooth. Pursh and Willdenow in his species plantarum, both refer to Morison's *fig.* 53 for *laciniata,* and to *fig.* 54 for *digitata,* yet the latter is a mere copy of Cornuti's figure referred to by both authors for *laciniata.* Willdenow in his Enumeratio refers to his former character of *digitata* as a synonym of *pinnata,* excluding the synonyms of Aiton and Morison, the latter of which we are inclined to consider as a synonym of our plant, though the same as Cornuti's figure referred in the Hortus Kewensis to *laciniata.*

Native of North America. Communicated by Mr. Salisbury from the Botanic garden at Brompton, in August 1815. It is a hardy perennial; propagated by its creeping roots. Introduced from the Madrid garden about the year 1803 by Lady Amelia Hume.

N.2311.



J. Curtis Del. Pub. by S. Curtis Walworth. April 2. 1822. Weddell Sc.

RUTA ANGUSTIFOLIA. NARROW-LEAVED RUE.

****

Class and Order,

DECANDRIA MONOGYNIA.

Generic Character.

Cal. 5—4-partitus. *Petala* concava. *Recept.* punctis melliferis 10 vel 8 cinctum.

Specific Character and Synonyms.

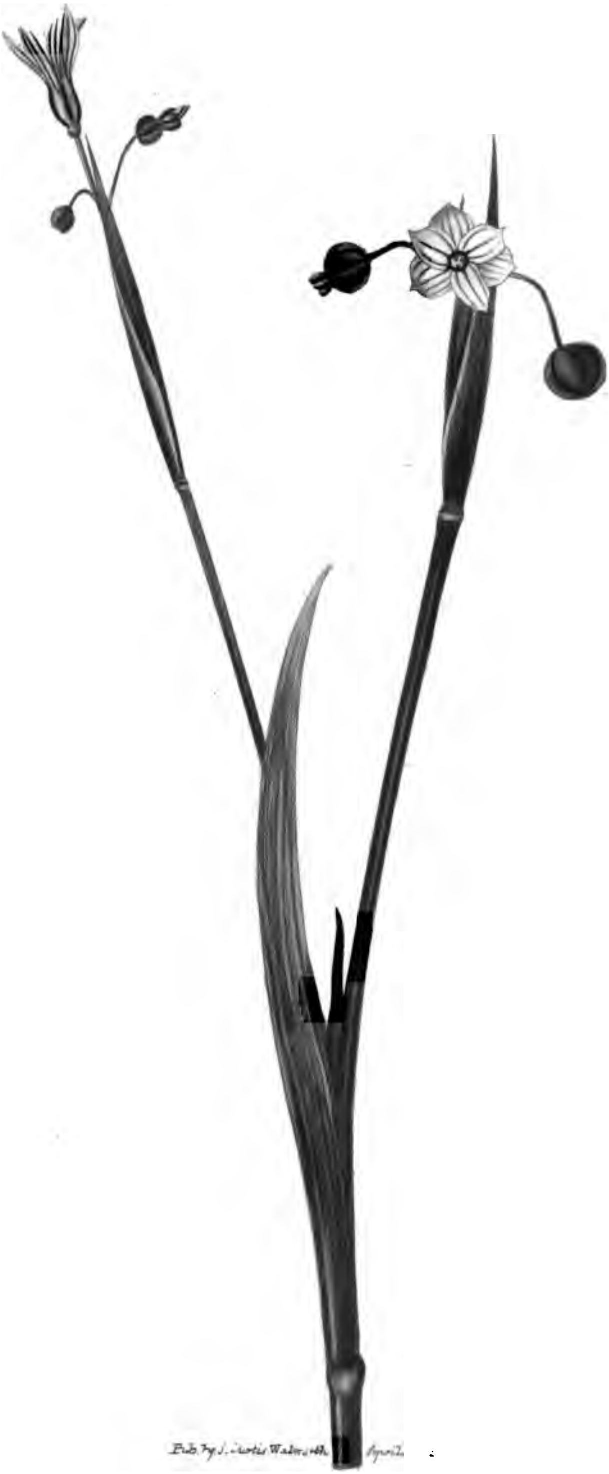
RUTA *angustifolia;* foliis supradecompositis: foliolis lineari-ellipticis subæqualibus, petalis ciliatis, capsulæ lobis acuminatis conniventibus.
RUTA *angustifolia;* foliis supradecompositis: lobis oblongo-cuneatis subæqualibus, petalis ciliatis. *De Cand. Cat. Hort. Monspel. p.* 140.
RUTA *angustifolia;* foliis inciso-pinnatifidis: laciniis lineari cuneatis, floribus corymboso-patulis, petalis ciliatis. *Persoon Syn.* 1. *p.* 464.
RUTA chalepensis, β. *Hort. Kew. ed. alt.* 3. *p.* 35. *De Cand. Fl. franç.* 4. *p.* 733. *Willd. Sp. Pl.* 2. *p.* 544.
RUTA chalepensis tenuifolia, florum petalis villis scatentibus. *Moris. Hist.* 2. *p.* 508: §. 5. *t.* 35. *f.* 8.

We think with PERSOON and DE CANDOLLE that the broad-leaved RUTA *chalepensis* is quite a distinct species from our plant, we have therefore not hesitated in adopting their name. At No. 2018 of this work we have given a figure of a species of RUTA under the name of *macrophylla,* which may perhaps be the broad-leaved variety of RUTA *chalepensis.* We believe that the connivent acute points of the lobes of the calyx will distinguish this, not only from that species, but also from *officinalis,* of which our plant has also been deemed a variety.

It is a tolerably hardy shrub; native of the stony soil of most parts of the South of France, and probably of the coast of Barbary. We have received specimens of it from Malta, but whether of spontaneous growth or not we are uncertain.

Communicated by N. S. Hodson, Esq. from the Botanic Garden, Bury St. Edmunds.

N.[illegible]



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Pub. by J. Curtis Walworth [illegible] April [illegible]

SISYRINCHIUM LAXUM. LOOSE-FLOWERED SISYRINCHIUM.

****

Class and Order.

MONADELPHIA TRIANDRIA.

Generic Character.

Spatha diphylla. *Cal.* 0. *Petala* 6, subæqualia, plana. *Filamenta* omnino connata. *Stylus* 1. *Caps.* 3-locularis, infera.

Specific Character.

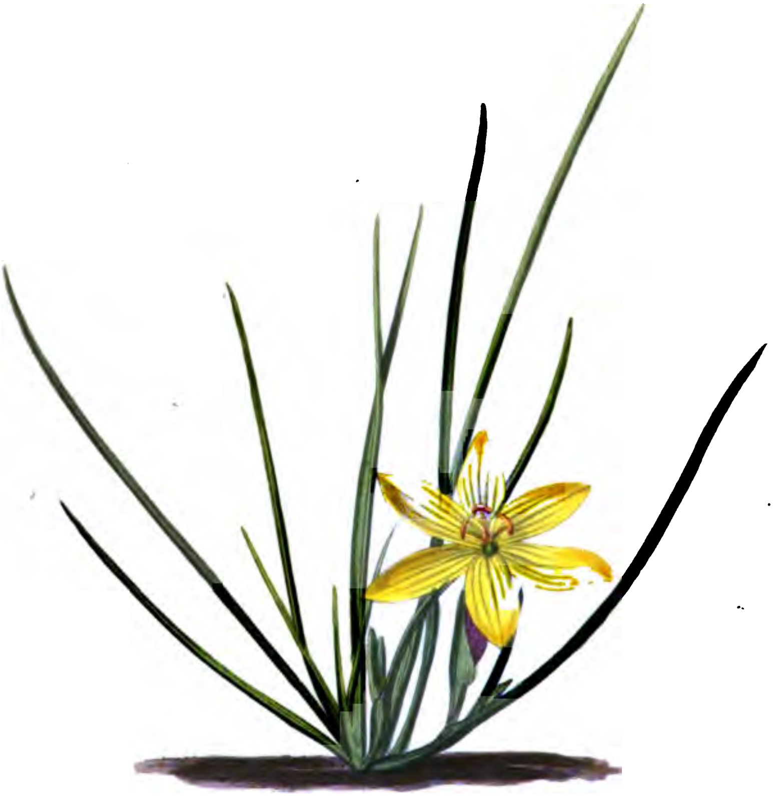
SISYRINCHIUM *laxum;* caule ramoso, foliis ensiformibus, spatha subæquali triflora, petalis planis striatis rotundato-ovatis cum acumine parvo.

This new species of SISYRINCHIUM was introduced into the Chelsea garden in 1820, by Mr. OTTO, Curator of the Berlin Botanical garden, under the name which we have adopted. Besides having white streaked flowers instead of yellow, this plant differs entirely from the figure of SISYRYNCHIUM *convolutum,* in the Hortus Berolinensis, though the specific character given of that plant in WILLDENOW's enumeratio applies to it pretty well.

Communicated by Mr. ANDERSON of the Chelsea garden, who has treated it as an alpine, and it has survived the last winter exposed to the open air.

Native country unknown. Flowers in June.

N.2313.



Curtis Del. Pub. by S. Curtis. Walworth. April 1. 1822. Weddell Sc.

SISYRINCHIUM TENUIFOLIUM. NARROW-LEAVED SISYRINCHIUM.

****

Class and Order.

MONADELPHIA TRIANDRIA.

Generic Character.

Spatha diphylla. *Cal.* 0. *Petala* 6, subæqualia, plana. *Filamenta* omnino connata. *Stylus* 1. *Caps.* 3-locularis, infera.

Specific Character and Synonyms.

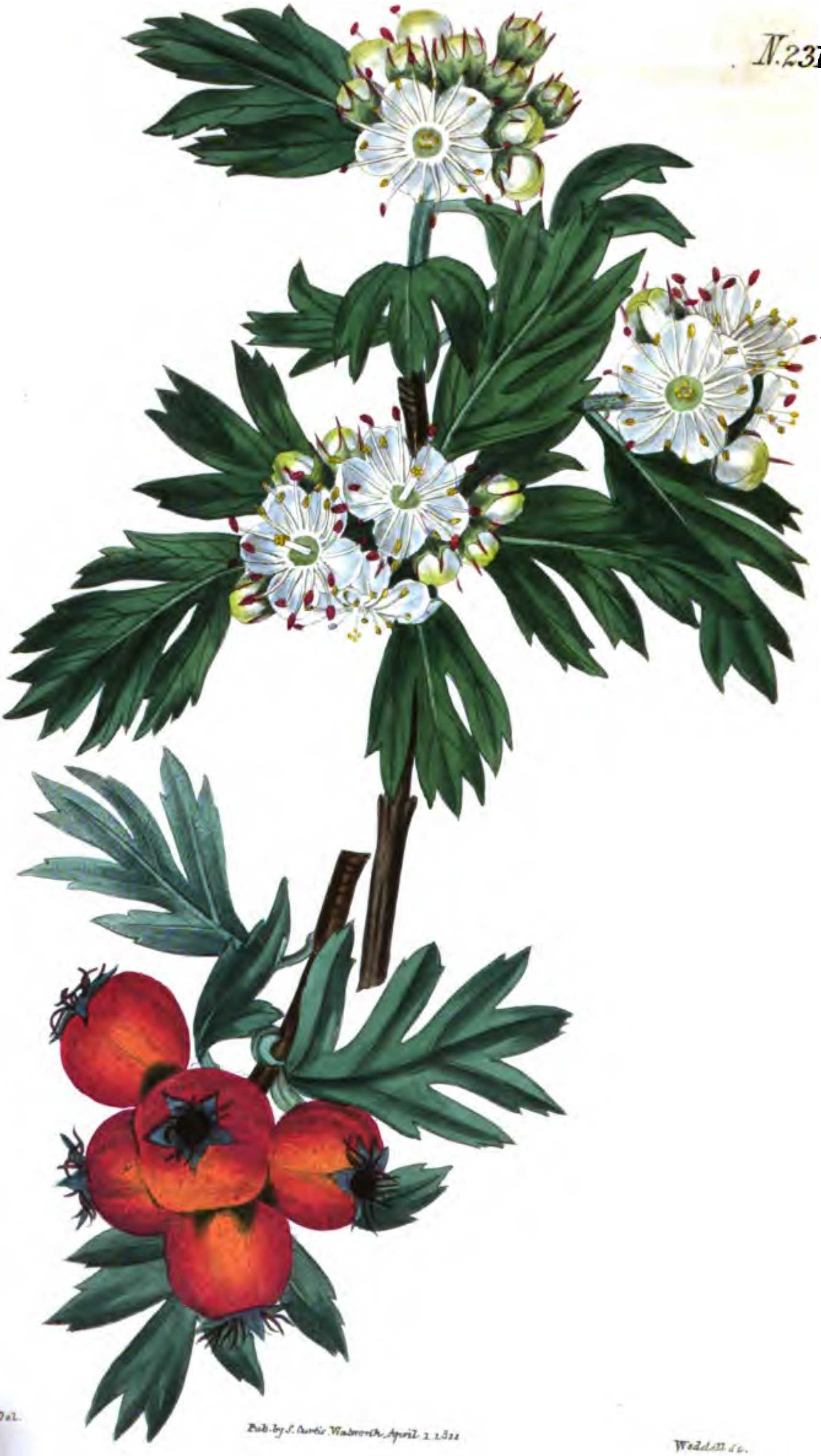
SISYRINCHIUM *tenuifolium;* scapo ancipiti adscendente folioso, spatha triflora, capsulis hirtis, foliis lineari-filiformibus. *Willd. Enum.* 691.

MARICA tenuifolia. *Ker, in Journ. of Sci. and Arts. v.* 1. *p.* 174.

For other synonyms and description, consult No. 2117. The prior publication of this species at the above number in vol. 47, had entirely escaped our memory, and the mistake was not discovered till the plates of the present number were completely worked off and coloured.

Our present figure was drawn earlier in the morning at the time the flower was fully expanded, before the petals were reflexed, as happens in a few hours after. Communicated by Mr. ANDERSON from the Apothecaries garden at Chelsea in July 1821.

N.2314.



is. Del.

Pub. by S. Curtis Walworth, April 1. 1822

Weddell sc.

MESPILUS ODORATISSIMA. SWEET-SCENTED HAWTHORN.

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Class and Order.

ICOSANDRIA PENTAGYNIA.

Generic Character.

Cal. 5-fidus. *Petala* 5. *Bacca* infera 5-sperma.

Specific Character and Synonyms.

MESPILUS *odoratissima;* foliis trapeziformibus utrinque pubescentibus pinnatifidis: laciniis inciso-dentatis: dentibus integerrimis.

MESPILUS *odoratissima;* foliis utrinque pubescentibus pinnatifidis: laciniis incisis. *Bot. Repos.* 590.

CRATÆGUS *orientalis;* foliis subtrifidis inciso-serratis hirsutis, floribus pentagynis, calycinis segmentis acutiusculis reflexis hirsutis. *Flor. taur. cauc.* 1. *p.* 387. *et.* 3. *p.* 322.

CRATÆGUS orientalis. *Pall. Ind. taur.*

MESPILUS orientalis. *Habl. taur.*

AZAROLI species ramis spinescentibus, foliis utrinque albido-lanatis, fructibus rubris. *Tourn. itin. ed. gallic.* 2. *p.* 172.

The number of styles by which LINNÆUS distinguished CRATÆGUS, SORBUS, MESPILUS, and PYRUS, being found quite too uncertain for the purpose, Sir JAMES E. SMITH has excluded the two former and referred the species to one or other of the two latter according to their fruit.

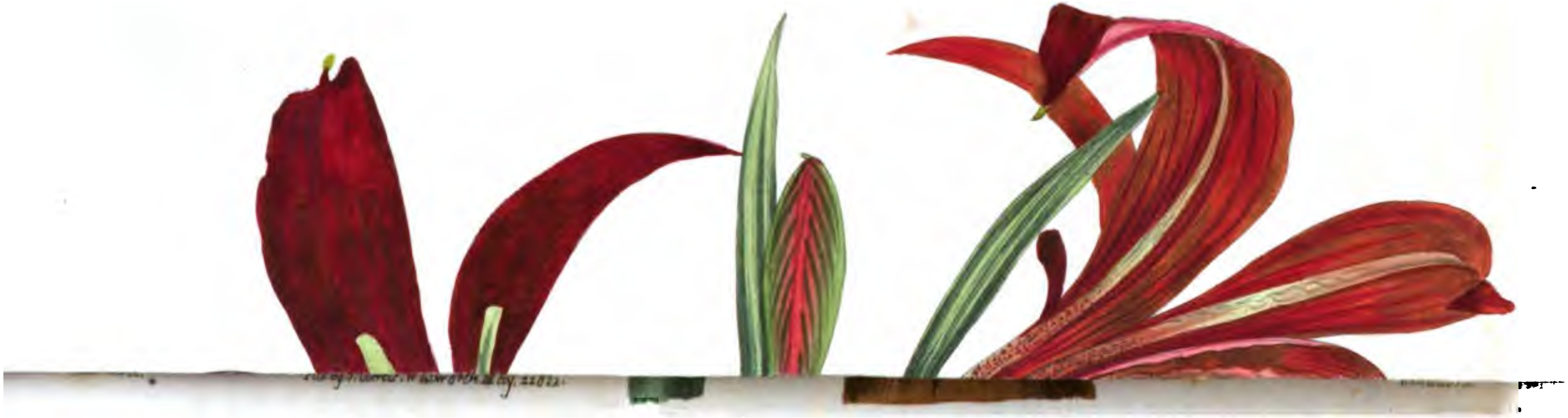
But Mr. LINDLEY in a paper lately published in the 13th volume of the Transactions of the Linnean Society, has restored the genus CRATÆGUS, finding characters independent of the styles, sufficient to establish what appears to be

a very natural genus. If the genus CRATÆGUS be retained, our plant should certainly rank under it, but as the nearly allied species MESPILUS *tanacetifolia* is arranged under MESPILUS in the Hortus Kewensis, an unwillingness for changing backwards and forwards restrains us, for the present, from making any alteration.

From having compared our plant with PALLAS's specimen of CRATÆGUS *orientalis* preserved in the Lambertian Herbarium, we have no doubt of their being of the same species, though the Taurian plant has a much longer and thicker pubescence; but MARSCHALL v. BIEBERSTEIN's character does not altogether accord with it, and leaves some doubt whether he has not described the *tanacetifolia;* which is distinguished from our plant, besides the difference of their fruit, by the segments of the leaves being minutely serrate, which in odoratissima are only cut into a few larger quite entire teeth.

A hardy tree. Flowers in June. Native of Southern Tauria on the borders of the Euxine sea. Communicated by JOHN WALKER, Esq. of Arno's grove.

N.2315.



Pub. by S. Curtis. Walworth May. 1. 1822.

(2315)

HIPPEASTRUM SPATHACEUM, HYBRIDUM.
LONG-SPATHED, HYBRID KNIGHT'S-STAR-LILY.

****

Class and Order.

HEXANDRIA MONOGYNIA.

Generic Character.—Vide No. 2273.

Specific Character.

HIPPEASTRUM *spathaceum;* spatha erecta persistente pluriflora, scapo foliis bis longiore, pedicellis cernuis corollæ lacinia ima angustissima, fauce nuda.

DESCR. *Leaves* 3, lingulate, widening towards the upper extremity, rather obtuse, streaked, recurved, shining green, six inches long and nearly an inch wide at the broadest part. *Scape* twice the length of the leaves, rounded, mealy white. *Spathe* two-valved, erect, lanceolate, three inches long, green, persistent. The *corolla* very like that of *rutilum,* the lower lacinia twice narrower than the others, star whitish green, faux not at all bearded as in Mr. HERBERT's *splendens.* The stigmas of both the flowers that were expanded when the drawing was taken were remarkable in having one of the segments much longer than the other two.

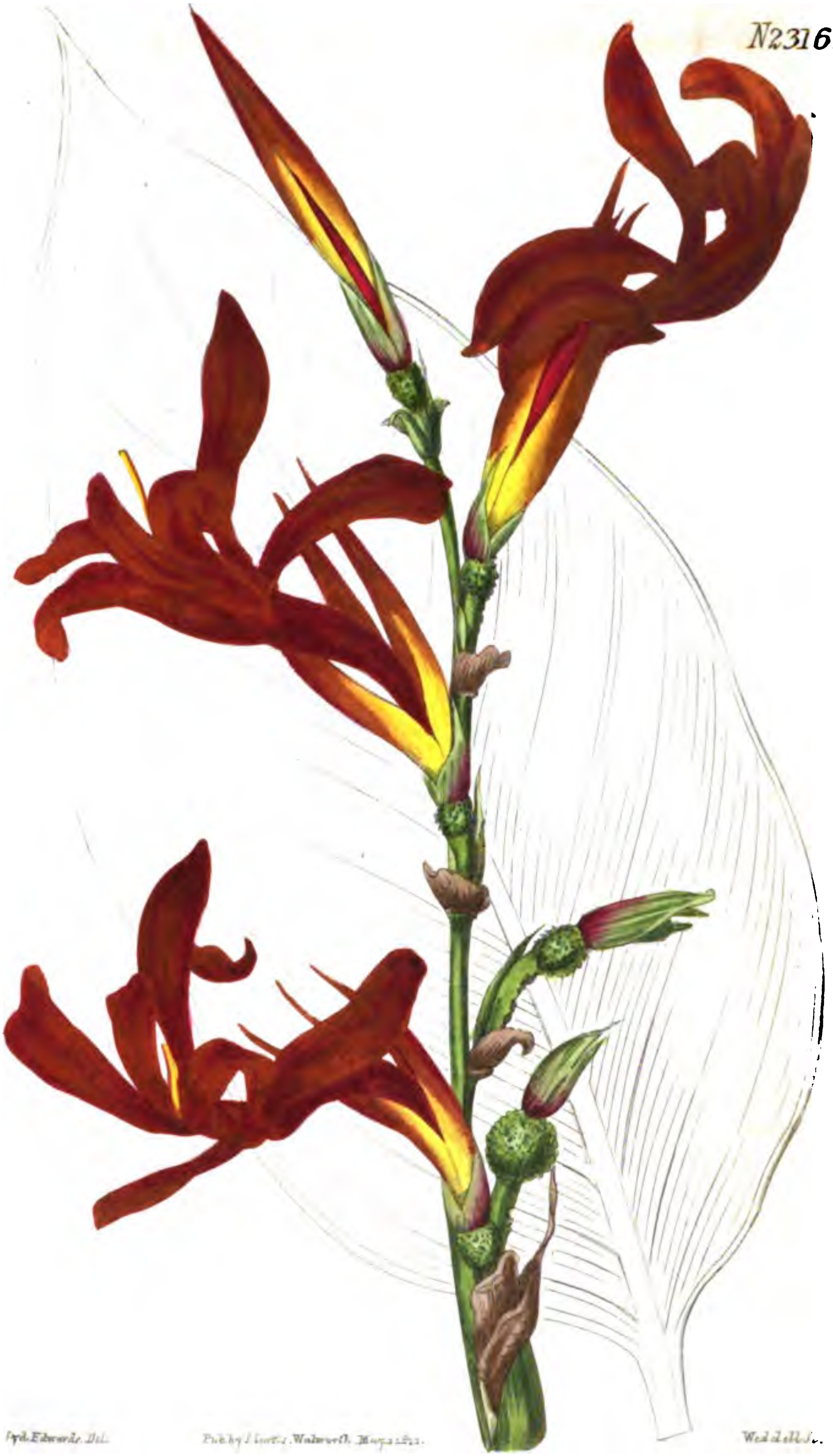
We received this very handsome flower from Mr. JOSEPH KNIGHT of the Exotic Nursery in the King's-Road.

From the similarity it bears to *rutilum* (AMARYLLIS rutila *Bot. Reg.* 23.) we suspected it might be a seminal variety of that species, or perhaps a mule production betwixt that and *equestre,* from the resemblance of the spathe to that of the latter. But we are informed by Mr. KNIGHT that he received the bulb from Mr. EDWARD BEARPARK, gardener to GEORGE JOHN LEGH, Esq. of High Legh in Cheshire, who has paid particular attention to the cultivation of the

Amaryllis tribe. A letter lately received from him by Mr. KNIGHT, states " that in 1814, he impregnated AMARYLLIS *vittata* with the pollen of A. *Reginæ;* the seed produced was sown early in 1815, and part of the offspring flowered in 1818. The early flowers were most of them stripped of their stamens, and impregnated with the pollen of Amaryllis *formosissima,* and the seed obtained was sown part in 1818, and part in 1819; the product of some of the former blossomed in 1821, and afforded flowers variously striped with red, pink, purple and white, and one different from the rest, bearing its flowers erect, and blooming one at a time in succession." The letter does not state to which of these Mr. KNIGHT'S bulb belonged. And we can hardly regard it as in any degree the product of AMARYLLIS *formosissima.*

These hybrid productions, so much in vogue at present, are certainly capable of affording pleasing varieties to the florist, but to the botanist they create a great deal of confusion and uncertainty. It must be allowed, however, that valuable physiological discoveries may be made by such enquiries; but to obtain satisfactory results, these experiments should be made with much greater accuracy than they seem hitherto to have been. Not only should the species from which the pollen is supplied be carefully recorded, but care should be taken to prevent the possibility of the access of other pollen; and seeds of the mother plant, from which all foreign impregnation has been carefully guarded against, should be sown at the same time that the mere seminal varieties may be compared with the hybrid productions.

N° 2316.



Syd. Edwards. Del. Pub. by J. Curtis, Walworth, May 1 1822. Weddell. Sc.

CANNA GIGANTEA. TALL CANNA.

****

Class and Order.

MONANDRIA MONOGYNIA.

Generic Character.

Anthera simplex, filamenti margini adnata. *Stylus* crassus, claviformis. *Stigma* obtusum. *Caps*. 3-locularis. *Sem*. globosa, numerosa.

Specific Character and Synonyms.

CANNA *gigantea;* laciniis corollæ internis tribus diffluentibus, tubo curvo, filamento revoluto infra medium antherifero, labello angustiore citius marcescente.

CANNA *gigantea*; limbo interiore semicirculari-4-radiato reflexo-patente, lacinia ima dextrorsum obliquata inæquilobo-retusa; filamento longe ultra antheram producto recurvatoque. *Bot. Reg*. 206.

CANNA gigantea. *Redouté liliac*. 331.

DESCR. *Stem* from three to six feet high, bearing scarlet flowers, on short peduncles generally growing by pairs. *Calycine leaflets* imbricate, sphacelated at the point. *Exterior laciniæ* of the corolla scarlet; *interior* ones three, the same colour, flowing about without order: *claws* united into a tube an inch long and curved. *Filament* fully as long and broad as any of the laciniæ, at first recurved, afterwards revolute, bearing the anther below its middle. *Labellum*, or lower lip of the nectary, like the other laciniæ, but somewhat narrower and sooner withering. *Style* after expansion longer and more petal-formed than in most of the species. Before expansion the anther, as in the other species, is longer than the filament and has a deep groove down the middle. *Style* of the same length with a thickened extremity extending some way down one edge, the true *stigma,* which at the first opening of the flowers is covered with the *pollen.* *Leaves* ovate-lanceolate, very large, from six inches to a foot and half, or two feet long.

Our drawing was made by the late Mr. SYDENHAM EDWARDS, in January 1812, from a plant that flowered in the stove at Messrs. WHITLEY, BRAME, and MILNE.

CANNA SPECIOSA. NAPAUL CANNA; QUEMATEE Of the Nawars.

* * * * * * * * * * * * * * * * * *

Class and Order.

MONANDRIA MONOGYNIA.

Generic Character.—Vide No. 2316.

Specific Character.

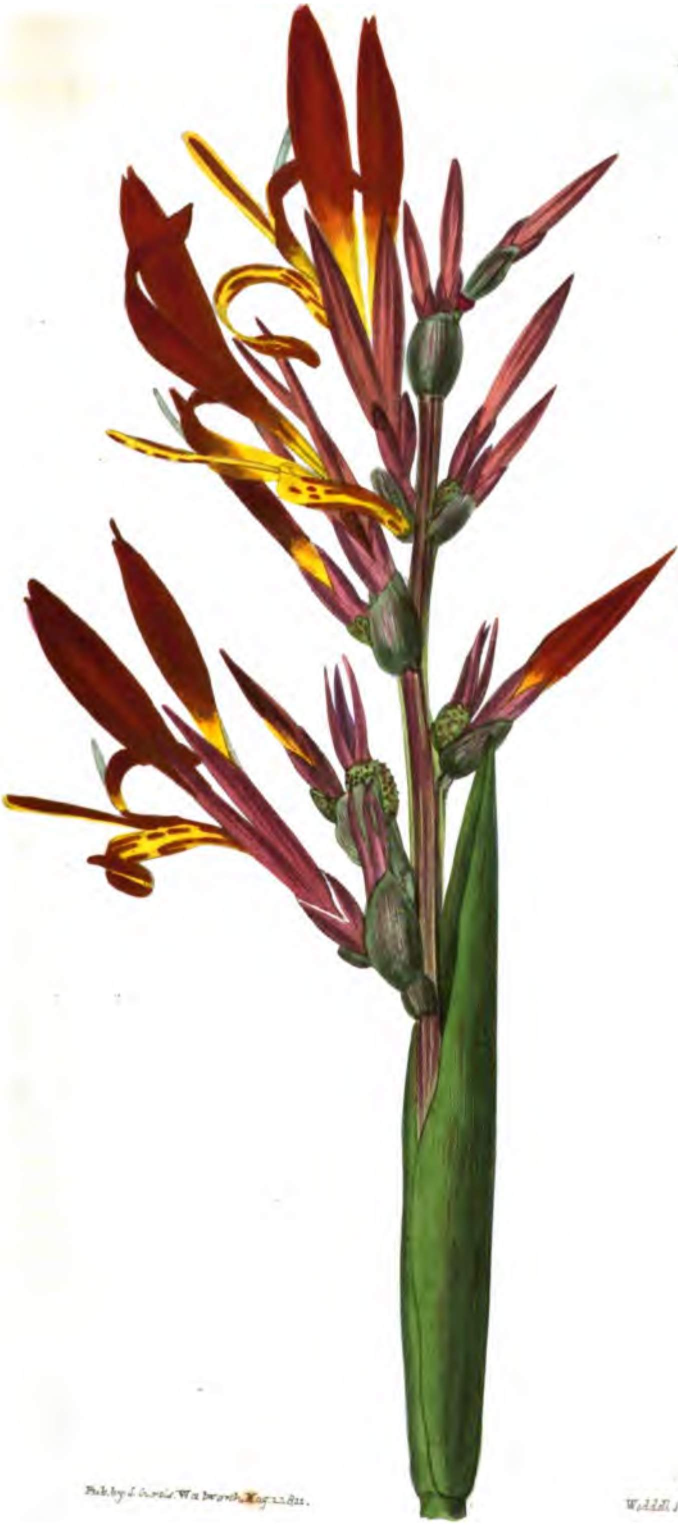
CANNA *speciosa;* floribus sessilibus geminatis, laciniis corollæ interioribus erectis tantum duabus emarginatis, labello maculato revoluto.

We received the drawing of this plant from the Hon. and Rev. WILLIAM HERBERT, of Spofforth, in December 1819. It flowered the preceding September in the open border, in front of the stove, but did not produce ripe seeds, as CANNA *indica* will do in the same situation.

It is remarkable from the corolla having only two erect interior laciniæ instead of three, which is the usual number. These are acute with the point cleft into two unequal teeth; are nearly double the length of the exterior laciniæ, and narrowed into a long claw. The above particularity induced Mr. HERBERT to give it the name of *bifida*, but he informs us that Mr. ROSCOE has called it *speciosa*, some other species having only two erect internal laciniæ; as is the case sometimes with *lutea* (No. 2085), though other flowers of this species have an intermediate shorter and smaller lacinia, which will account for our description and figure of that species not exactly corresponding.

The leaves, Mr. HERBERT observes, are broader in proportion to their length and less acute than those of *indica* and *lutea*.

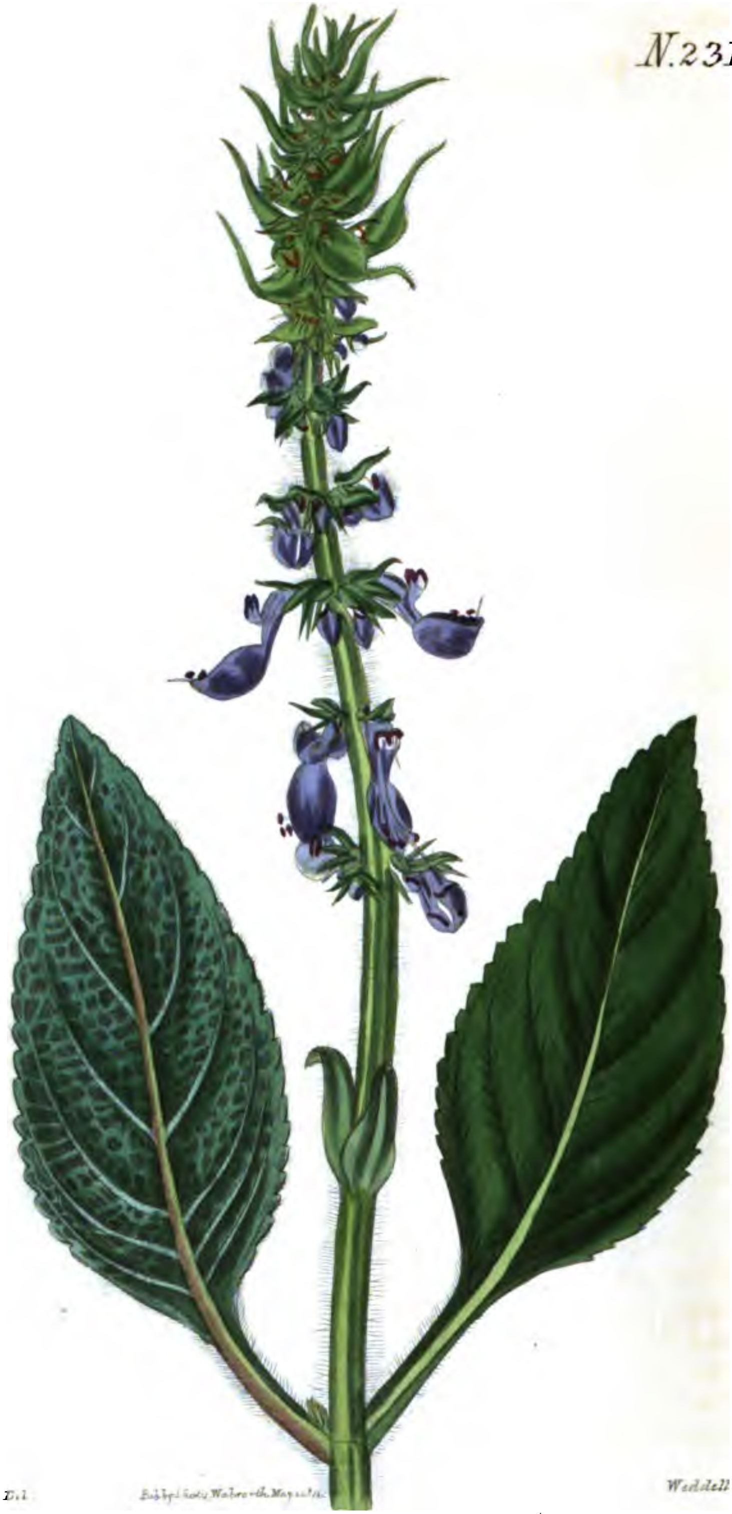
N.2317.



Pub. by S. Curtis Walworth Aug. 1. 1822.

Weddell Sc.

N. 2318.



J. Curtis Del. Pub by S. Curtis, Walworth, May 1. 1822. Weddell Sc.

PLECTRANTHUS COMOSUS. TUFTED PLECTRANTHUS.

****

Class and Order.

DIDYNAMIA GYMNOSPERMIA.

Generic Character.

Cal. 2-labiatus, labio inferiore diviso, striatus: fructifer basi subtus gibbosus. *Cor. labium superius* 3-fidum, lacinia media biloba: *inferius* longius, integrum (plerumque concavum). *Stamina* declinata, filamentis edentulis (nunc basi connatis): *antheris* unilocularibus, imberbibus. BROWN.

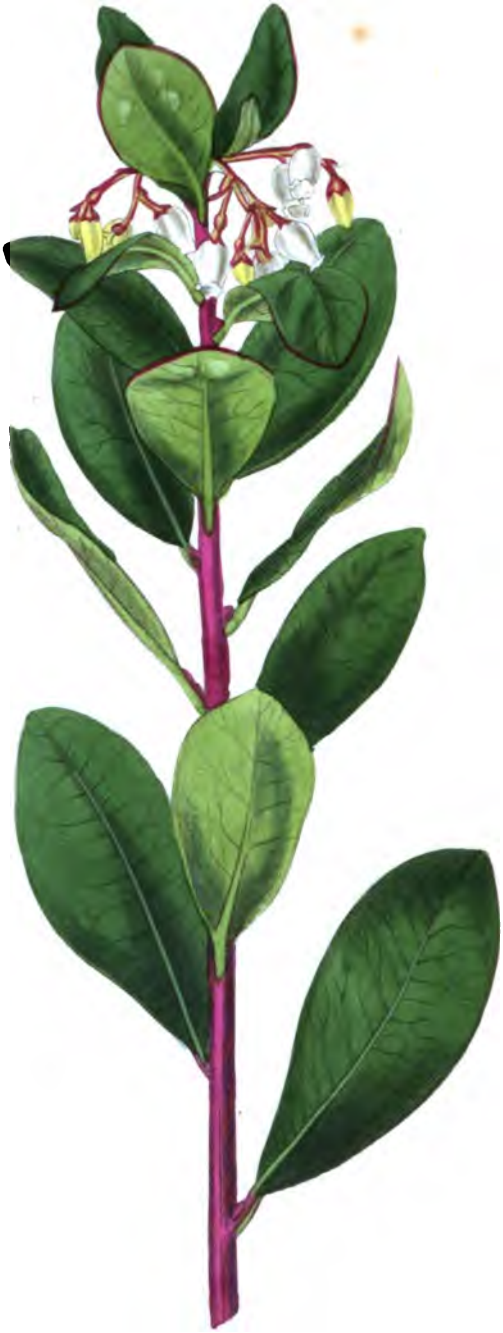
Specific Character.

PLECTRANTHUS *comosus*; floribus verticillatis sessilibus, calycis labio inferiore quadripartito, bracteis cordatis acuminatis caducis.

DESCR. *Stem* square, obtuse-angled. *Leaves* ovate-oblong, crenate, covered with white adpressed hairs on the upper surface and tomentose on the under. *Flowers* in terminal, verticillate spikes, before expansion almost concealed by large cordate, concave, acuminate *bractes,* which fall off as the flowers open and leave the whorls naked. *Calyx* hairy, two-lipped: lower lip divided into four equal segments. *Corolla* two-lipped: *upper-lip* short emarginate with two furrows: *lower* contracted above the gibbous tube, then expanded, boat-shaped, hairy on the outside. *Style* exserted: *stamens* inclosed: *anthers* violet coloured, with orange-coloured pollen.

We believe this to be hitherto an undescribed species of Plectranthus; raised from seeds supposed to be from Napaul, at the Fulham Nursery, by Messrs. WHITLEY, BRAME and MILNE. We find a specimen very much like it, without the bractes, in our friend Mr. LAMBERT's herbarium, from the Mysore, collected by FRANCIS HAMILTON, M. D. late BUCHANAN.

N2319.



Curtis Del. Pub by S. Curtis Walworth May 1 1822. Weddell Sc.

ARBUTUS UNEDO, VAR. δ. INTEGERRIMA.

****

Class and Order.

DECANDRIA MONOGYNIA.

Generic Character.

Cal. 5-partitus. *Cor.* ovata: ore 5-fido; basi pellucida. *Bacca* 5-locularis.

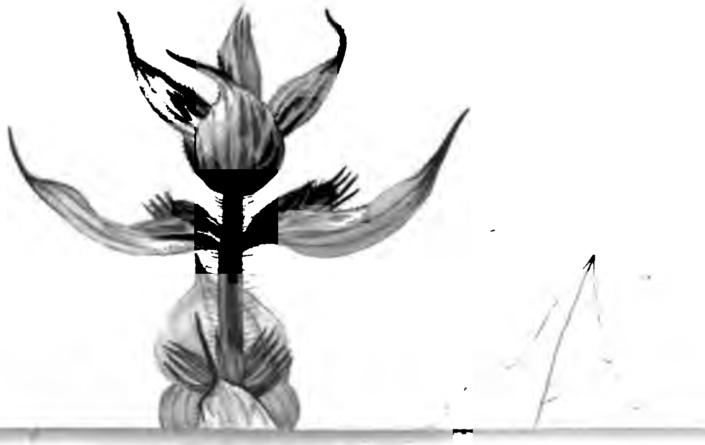
Specific Character and Synonyms.

ARBUTUS *Unedo;* caule arboreo, foliis oblongo-lanceolatis, paniculis glabris nutantibus, baccis polyspermis. *Hort. Kew. ed. alt.* 3. *p.* 56.
ARBUTUS *Unedo;* caule arboreo, foliis glabris obtuse serratis, panicula terminali, baccis polyspermis. *Lin. Suppl,* 238. *Willd. Sp. Pl.* 2. *p.* 616. *Smith. Fl. Brit. p,* 442. *Engl. Bot. f.* 2377.
ARBUTUS folio serrato. *Bauh. Pin.* 460. *Mill, ic.* 48,
ARBUTUS *Cam. Epit.* 168. *Ger. Emac.* 1496.
ARBUTUS Camarus Theophrasti. *Bauh, Hist.* 1. *p.* 83.
(α.) flore simplici, corollis albidis.
(β.) flore simplici, corollis rubicundis.
(γ.) flore pleno.
(δ.) foliis integerrimis.

The ARBUTUS *integrifolia* of LAMARCK, is probably a variety of ARBUTUS *Andrachne.* That our plant, specimens of which we received from our friend JOHN WALKER, Esq. is a mere variety of A. *Unedo,* we are convinced, having received exactly similar specimens from Messrs. LODDIDGES and SONS, which they assured us were raised by them from seeds of A. *Unedo.* As a shrub it appears to be less ornamental than the common sort, from which it differs not only in the margins of the leaves being quite entire, but also in the branches being smooth.

Is perfectly hardy. Flowers from October to January.

N.2320.



SALVIA BRACTEATA. LONG-BRACTED SAGE OR CLARY.

****

Class and Order.

DIANDRIA MONOGYNIA.

Generic Character.

Cor. inæqualis. *Filamenta* transverse pediçello affixa.

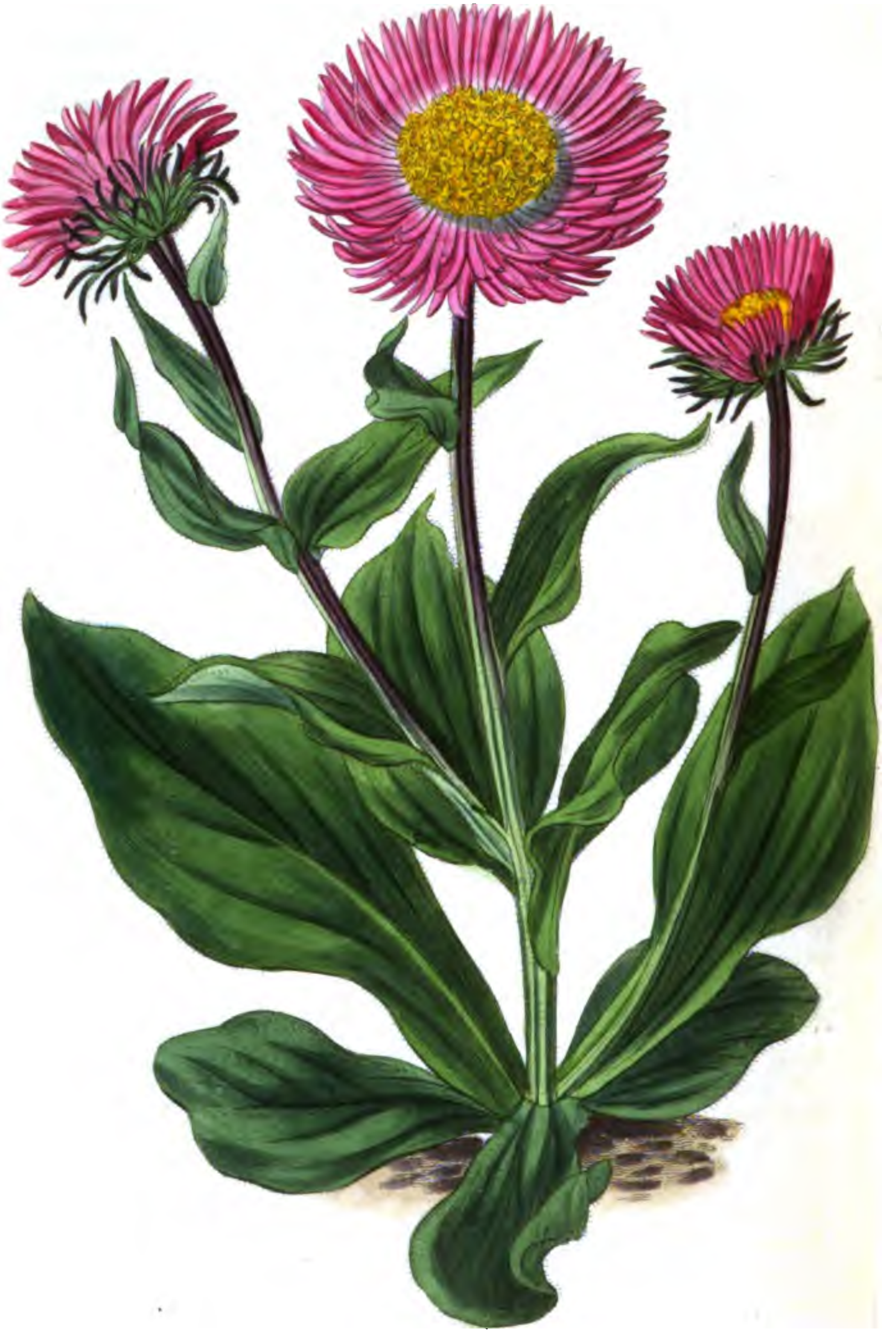
Specific Character.

SALVIA *bracteata;* bracteis concavis aristatis flore longioribus coloratis; summis sterilibus, galea falcata emarginata, foliis ovatis rugosis repando-crenatis.

DESC. *Stem* upright, rigid, square with rounded angles, branched, covered with pellucid hairs. *Leaves* ovate-acuminate, crenate-sinuate: uppermost ones entire. *Flowers* in distant, about six-flowered whorls; each whorl supported by two ovate-acuminate, concave, streaked *bractes,* longer than the flowers, greenish at the base, rose-coloured towards the apex which terminates in a filiform awn. *Calyx* 5-toothed: *teeth* awned, not pungent while fresh, bilabiately arranged: intermediate tooth of the upper-lip almost obsolete. *Corolla* ringent: *upper-lip* falcate, emarginate, concave, of a bright violet colour, hairy and studded with pellucid dots: *lower-lip* 3-lobed; middle lobe round, emarginate, white but soon turning brown; lateral lobes pale violet. *Stamens* inclosed. *Filaments* club-shaped at the lower extremity, and thence tapering in a semicircular curve to a point, bearing a violet coloured anther, with white pollen; this filament is fixed by a moveable joint near the broad extremity to a short upright pedicle. *Style* exserted: lower segment of the *stigma* shorter by half than the upper.

A hardy perennial; raised from seeds received from Russia in the garden of Mr. Kent at Clapton, where it flowered in July 1820, and has survived the two last winters in the open border. It is a remarkable fine plant from the large rose coloured bractes and blue and white flowers, yet as far as we have been able to extend our researches, appears to us to be undescribed. It approaches however to Salvia *Sclarea,* in the figure of which in the Flora græca, the bractes are slightly tinged at the margins with the same colour. But our plant differs in having the bractes, and teeth of the calyx more elongated; the upper-lip of the corolla narrower, longer, and of a violet instead of pink colour; in the filament being more curved, which in *Sclarea* is only turned up at the point.

N. 2321.



J. Edwards. Del. Pub by S. Curtis Walworth Jun 1. 1822. Weddell sc.

ASTER ALWARTENSIS. FINE-RAYED STAR-WORT.

****

Class and Order.

SYNGENESIA POLYGAMIA SUPERFLUA.

Generic Character.

Recept. nudum. *Pappus* simplex. *Cor.* radii plures 10. *Calycis* imbricati squamæ inferiores patulæ.

Specific Character and Synonym.

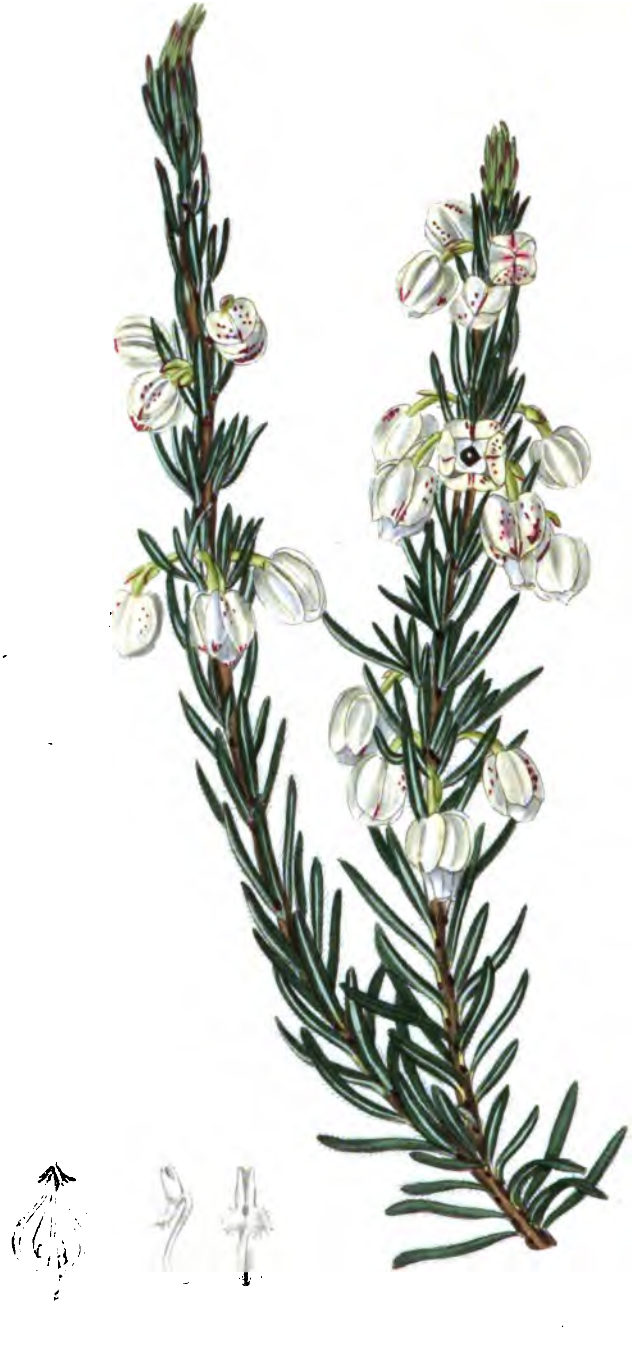
ASTER *alwartensis;* foliis ovatis basi angustatis integerrimis subquinquenerviis, calyce laxo squarroso, radio multifloro tenuissimo.
ASTER alwartensis. *Lodd. Catal.* 1807.

This very shewy dwarf ASTER, was raised by Messrs. LODDIGES and SONS, from seeds sent them by Prof. STEPHAN of Moscow, from Caucasus, under the name which we have adopted, before the year 1807; as it occurs in the catalogue of their garden of that year. But it appears to have been soon lost, being omitted in their next edition, published in 1809.

Our drawing was made by Mr. SYDENHAM EDWARDS at the time of its flowering in May, from a plant communicated by our above named friends; but the publication has been deferred in hopes of having an opportunity of knowing more concerning it; but never having met with the plant in any of our collections since, and not finding any of the species recorded in the Flora taurico-caucasica of MARSCHALL v. BIEBERSTEIN to correspond with it, we have determined no longer to delay its publication.

It approaches nearest to ASTER *alpinus* (supra No. 199); but differs in too many points to be taken for a variety of that species.

N.2322.



Pub. by S. Curtis Walworth June 1 1822

Weddell Sc.

ERICA ANDROMEDÆFLORA, β. TRIUMPHANS. BLOOD-SPOTTED WHITE ANDROMEDA-FLOWERED HEATH.

****

Class and Order.

OCTANDRIA MONOGYNIA.

Generic Character.

Cal. 4-phyllus. *Cor.* persistens: limbo 4-fido. *Antheræ* ante anthesin per foramina duo lateralia connexæ. *Caps.* 4—8-locularis, 4—8-valvis.

Specific Character and Synonyms.

SECT. IV. CALYCINÆ. A. Cristatæ.

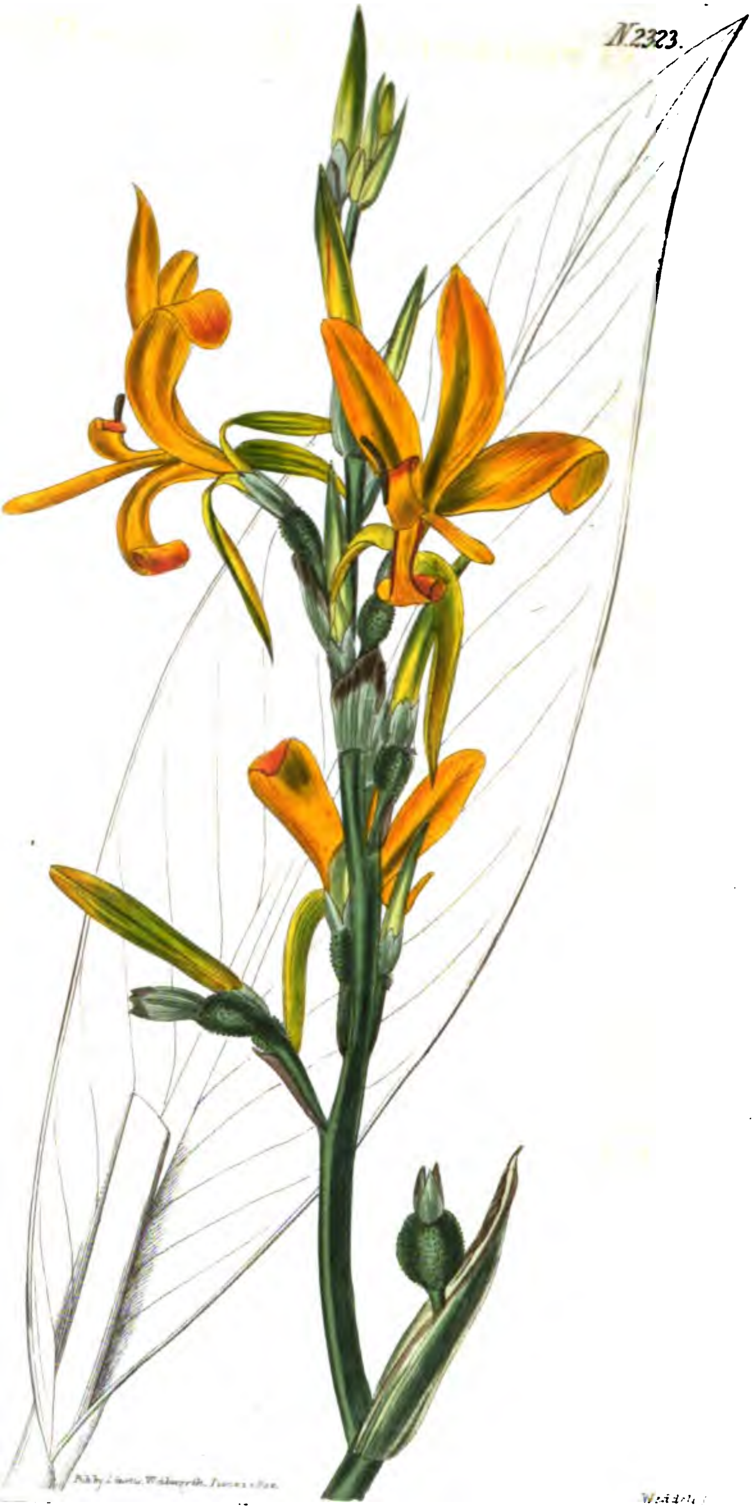
ERICA *andromedæflora;* bracteis a calyce remotis, foliis patentissimis internodiis multoties longioribus viridibus. *Hort. Kew. ed. alt.* 2. *p.* 386. *Bot. Mag.* 1250. *Andrews Heaths,* vol. 3.
(β.) *floribus albis maculis sanguineis notatis, corollæ limbo arctiore.*
ERICA triumphans. *Lee.*

Though a stouter plant, larger in all its parts than *Andromedæflora,* as the latter usually occurs, yet we cannot find any characters sufficient to distinguish it as a species, we are therefore constrained to consider this fine Heath as only a variety.

DESCR. A low shrub, with brown bark, tuberculated by the ligneous remains of the petioles, or rather buttress-like stipules to which the petiole is attached. *Leaves* ternate, patent, several times longer than the interstices, channelled on the under side, mucronate, when young ciliated at the sides. *Peduncles* axillary, cernuous, white, with two red tipped *bractes*, remote from the calyx. *Calycine leaflets* four, oval, concave, mucronulate, concealing the greater part of the corolla; white, stained here and there with bright blood-red blotches without fixed form or order, which however entirely disappear with age. *Tube of the corolla* globular with four obtuse angles, diaphanous: *limb* four-cleft: *laciniæ* erect, connivent, truncate, white. *Anthers* black, crested, included. *Germen* octagonal, seated on a fleshy receptacle. *Style* nearly equalling the limb of the corolla.

This beautiful Heath was communicated in March last by Mr. Lee from his very magnificent collection at Hammersmith, where it is known by the name of Erica *triumphans*.

N.2323.



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Pub by S. Curtis, Walworth, June 1. 1822.

Weddell sc

CANNA PEDUNCULATA. PEDUNCLED CANNA.

****

Class and Order.

MONANDRIA MONOGYNIA.

Generic Character.

Anthera simplex, filamenti margini adnata. *Stylus* crassus, claviformis. *Stigma* obtusum. *Caps.* 3-locularis. *Sem.* globosa, numerosa.

Specific Character.

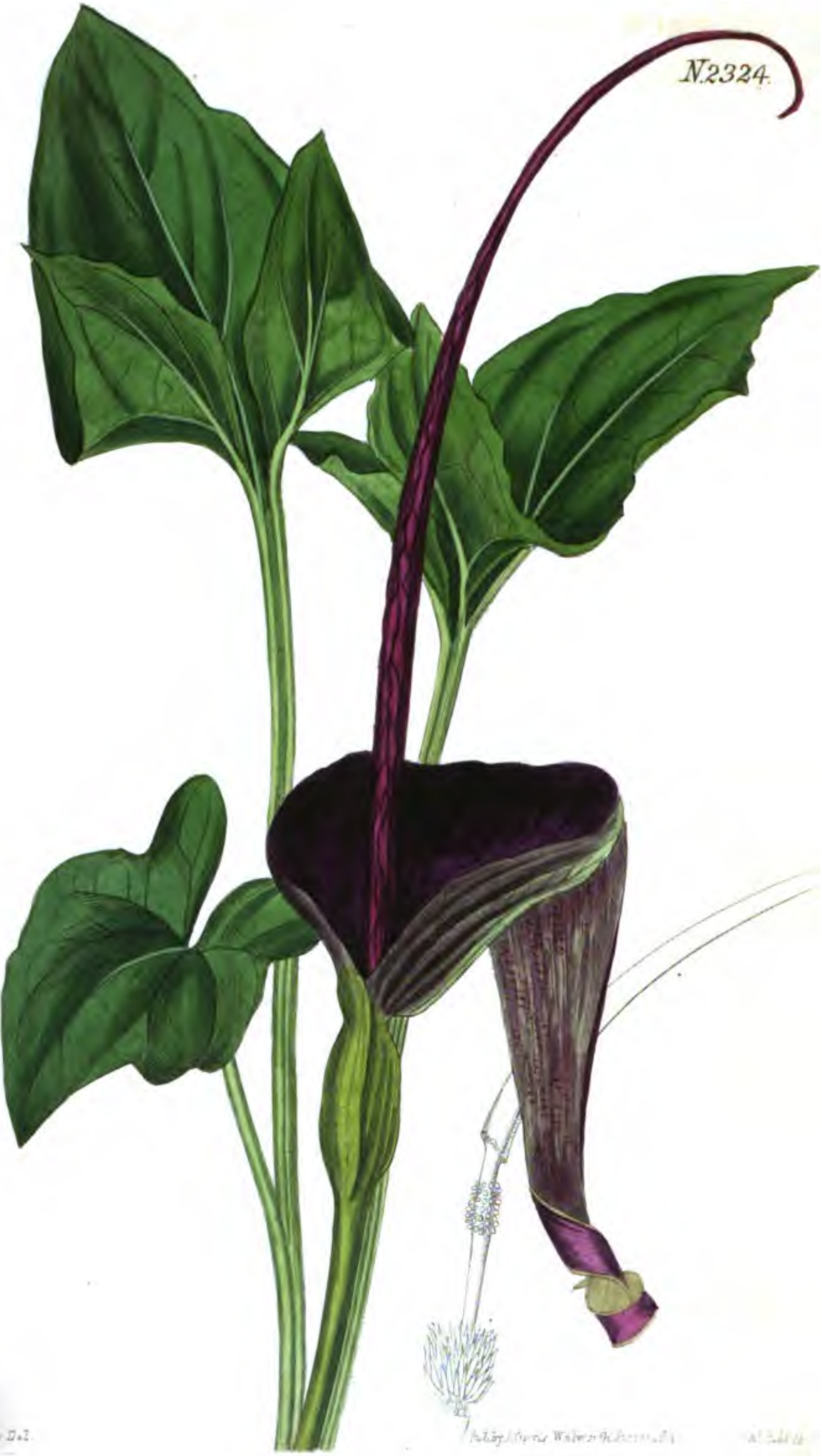
CANNA *pedunculata;* laciniis externis reflexis; internis erectis tribus, foliis lanceolatis utrinque angustatis, floribus pedunculatis.

The CANNA *pedunculata* is a tall, branched species, remarkable for its narrow sharp-pointed leaves; and, more especially, for the reflexed outer laciniæ of the corolla, which parts in most of the species are quite erect. The peduncles too, though, in our individual, not very long, yet exceed those of the more common kinds.

We were favoured with the specimen from which our drawing was taken by Messrs. LODDIGES and SONS; who had their plant, under the name which we have adopted, from Mr. ROSCOE the celebrated author of a new arrangement of the SCITAMINEÆ, the further illustration of which, is anxiously expected from the same intelligent source.

It flowered in the stove at Hackney in March.

N.2324



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ARUM TRILOBATUM, β. AURICULATUM.
AURICULATED THREE-LOBED ARUM.

* * *

Class and Order.

MONŒCIA POLYANDRIA.

Generic Character.

Spatha monophylla, cucullata. *Spadix* supra nudus, inferne femineus, medio stamineus.

Specific Character and Synonyms.

** Acaulia, foliis simplicibus.

ARUM *trilobatum;* foliis sagittato-trilobis, spadice elongato subulato.
ARUM *trilobatum;* acaule, foliis sagittato-trilobis, flore sessili. *Sp. Pl.* 1360. *Willd.* 4. *p.* 483. *Hort. Kew. ed. alt.* 5. *p.* 308.
ARUM *trilobatum;* acaule, foliis cordatis: aliis superne integris, aliis trilobatis; spadice longo subulato. *Lam. Encycl.* 3. *p.* 10.
ARUM trilobato folio humilius et minus Zeylanicum. *Herm. Parad. p.* 78. *t.* 78.
ARUM humile Zeylanicum latifolium, pistillo coccineo. *Commel. Hort.* 1. *p.* 97. *t.* 51?
ARUM Ceylanicum humile latifolium pistillo purpureo. *Mill. Icon.* 1. *p.* 35. *t.* 52. *f.* 2.
ARISARUM amboinicum. *Rumph. Amb.* 5. *p.* 320. *t.* 110.
PANUALA Zeylanensium.
(α.) foliis planis, flore sessili. *Bot. Mag.* 339.
(β.) foliis basi cucullato-auriculatis, flore pedunculato.

We received this plant in March last, from Mr. BLAKE, gardener to the late JAMES VERE, Esq. under the name of ARUM *auriculatum,* but it is undoubtedly only a variety

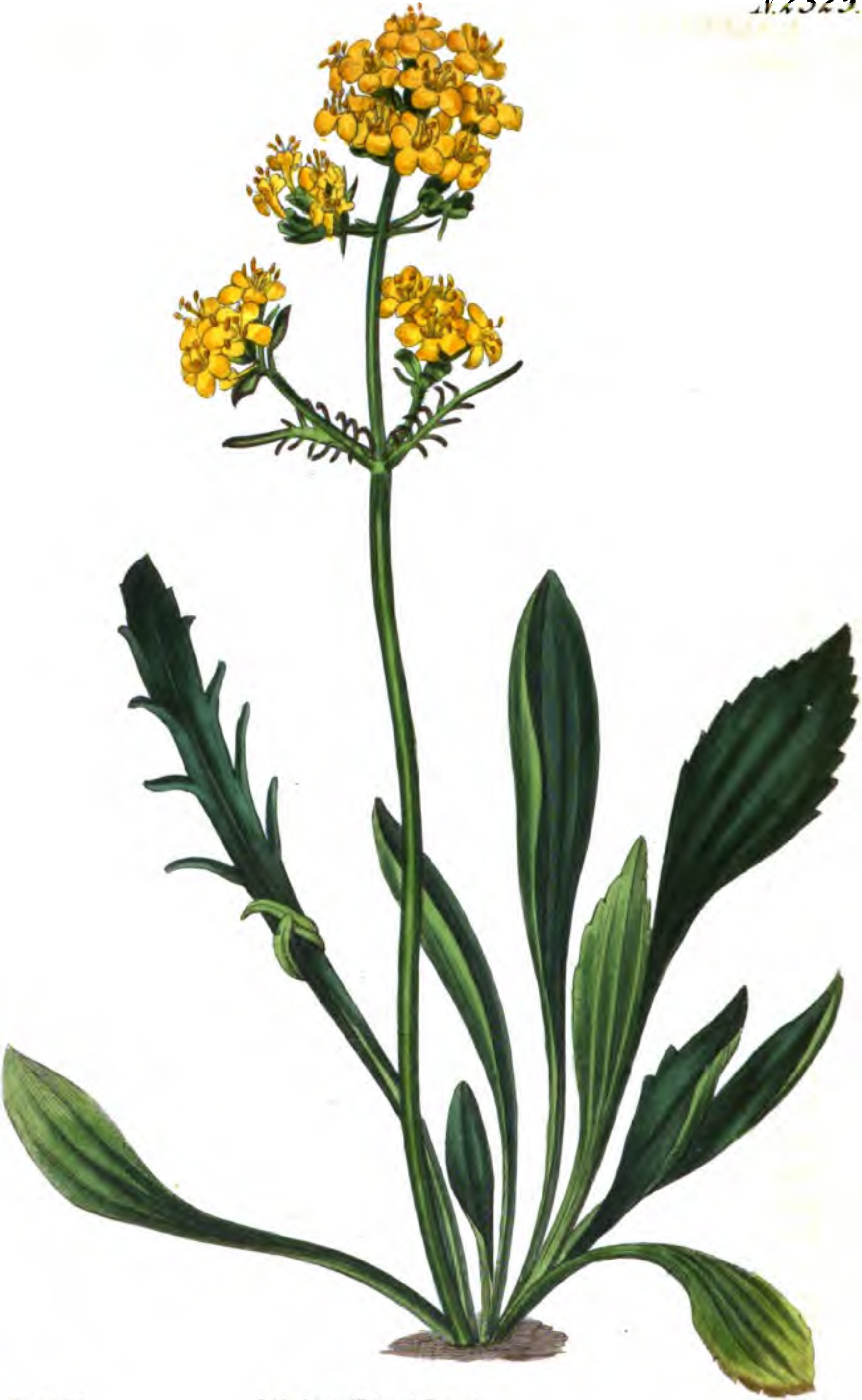
of **Arum** *trilobatum;* the leaves of which species, as M. **Lamarck** has observed vary exceedingly in form.

The **Arum** *trilobatum* is a native of Ceylon, and **Herman** observes that the inhabitants eat the roots, when deprived of their acrimony by boiling or drying them in the sun.

Philip Miller received the roots from Ceylon in 1752, which flowered at Chelsea the two following years; but we are told in the Hortus Kewensis from the authority of the philosophical transactions, that this plant was cultivated by Mr. **Thomas Fairchild** before the year 1714.

It requires to be kept in the stove.

N.2325.



Syd Edwards Del. Pub by S. Curtis, Walworth, [illegible] Weddell Sc.

VALERIANA RUTHENICA. ALTAIC VALERIAN.

****

Class and Order.

TRIANDRIA MONÓGYNIA.

Generic Character.

Cal. 0. *Cor.* 1-petala, basi hinc gibba, supera. *Sem.* 1.

Specific Character and Synonyms.

VALERIANA *ruthenica;* floribus tetrandris, foliis ovatis carnosis pinnatifido-dentatis, seminibus paleæ ovali adnatis. *Willd. Sp. Pl.* 1. *p.* 181.
VALERIANA sibirica. *Lin. Sp. Pl.* 48. non Willdenovii.
VALERIANA lutea humilis. *Amman. Ruth.* 18. *n.* 25. *t.* 3.
FEDIA *sibirica;* foliis subcarnosis, caulinis pinnatifidis, laciniis integerrimis obtusis subuniformibus caule bifariam piloso. *Vahl. Enum.* 2. *p.* 22.
FEDIA sibirica. *Gærtn. fruct.* 2. *p.* 37. *t.* 86. *f.* 3.
FEDIA ruthenica. *Sweet Hort. suburb. p.* 8.
PATRINIA *sibirica;* foliis subcarnosis pinnatifidis; laciniis integerrimis obtusis subreniformibus, caule bifariam piloso, floribus corymbosis. *Dufrésne Valer. p.* 54. *Roem. et Sch. Syst. Veg. v.* 3. *p.* 89.
PATRINIA coronata. *Fischer Hort. Gorenki.* 43.

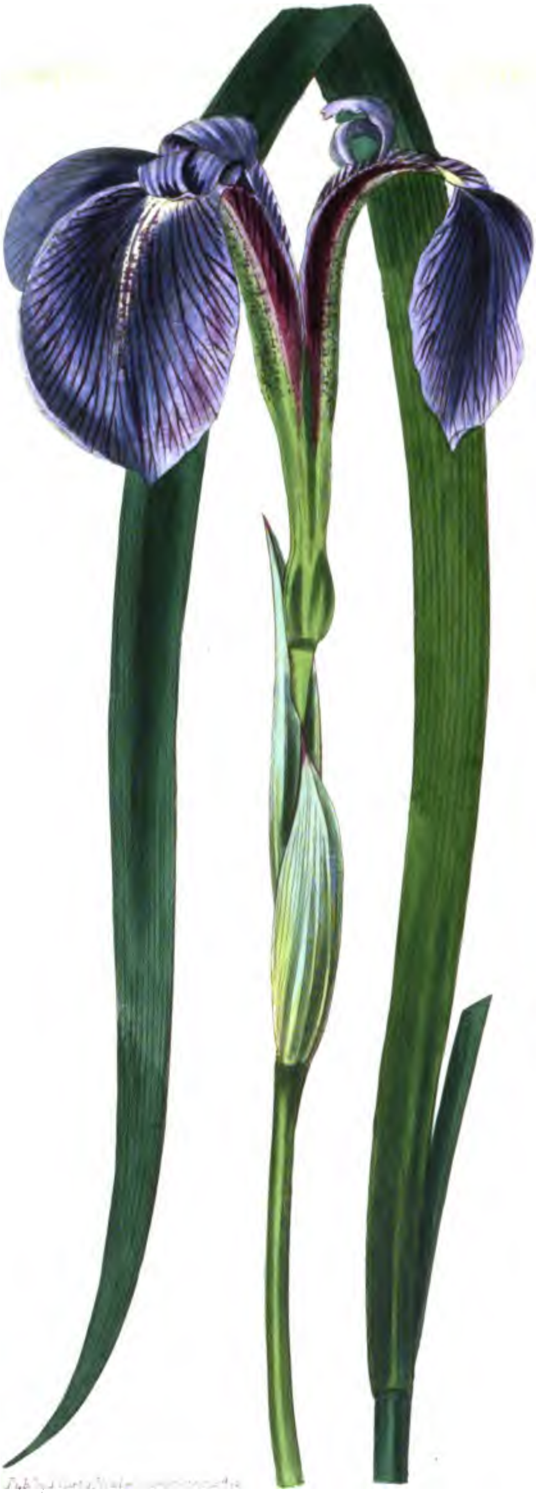
In JUSSIEU's Genera Plantarum, the genus VALERIANA is considered as making a section of *Dipsaceæ,* but afterwards in the Annáles du Muséum, he confirmed the propriety of separating the *Valerianeæ* as a distinct family, and in consequence has divided the Linnean genus VALERIANA into several, either by adopting in part the genera which had been separated before or establishing new ones. Among the latter he proposed the genus PATRINIA to which both our present plants and the one figured above (No. 714,) under the name of VALERIANA *sibirica,* belong. It seems generally

agreed that WILLDENOW mistook the species which LINNÆUS designated by the name of *Sibirica,* which properly belongs to our present plant, but having before retained that of WILLDENOW, which is also adopted in the HORTUS KEWENSIS, we think it least likely to occasion confusion still to adopt his name, leaving the correction to our synonyms. Our VALERIANA *sibirica* (No. 714,) is PATRINIA *rupertris* of ROEMER and SCHULTES, FEDIA rupestris of VAHL. At the time of publishing our VALERIANA *sibirica* we observed that the VALERIANA *ruthenica* possess the fragrance of Jasmine, but it is not altogether without a slight admixture of the odour of officinal Valerian.

Native of the Altaic mountains, which form the southern boundaries of Siberia. Flowers in June and July.

Communicated by Messrs. LODDIGES and SONS.

N.2326.



Del. Pub. by S. Curtis Walworth [illegible] Weddell Sc.

IRIS BRACHYCUSPIS. POISONOUS-ROOTED IRIS.

****

Class and Order.

TRIANDRIA MONOGYNIA.

Generic Character.

Cor. 6-partita: laciniis alternis reflexis. *Stigmata* petaliformia.

Specific Character and Synonym.

IRIS *brachycuspis;* imberbis, foliis lineari-lanceolatis longissimis, laciniis corollæ interioribus brevissimis, stigmatibus spiraliter revolutis.

IRIS brachycuspis. *Fischer Mscr.*

The interior upright laciniæ of the corolla are in this species so remarkably short, as to be frequently altogether concealed from view by the external.

We are informed by our friend Dr. FISCHER, who lately paid a visit to this country, that it is a native of the north-eastern part of Siberia, near Ochtosk, on the Lena river, from whence the seeds were brought to the Gorenki garden, by Professor ADAMS, and distributed thence by Dr. FISCHER to several parts of Europe.

The roots are said to be poisonous.

Communicated by Messrs. WHITLEY, BRAME, and MILNE, from the Fulham nursery, in July 1819.

N.2327.

JACARANDA OVALIFOLIA. OVAL-LEAVED JACARANDA.

****

Generic Character.

Cal. 5-dentatus. *Cor.* fauce campanulata: limbo bilabiato. *Filamentum quintum* sterile, longius, barbatum. *Caps.* ovata, bilocularis, bivalvis: dissepimento contrario, valvis planiusculis adnato. *Semina* alata.

Arbores. Folia *opposita, abrupte-rariusve impari-pinnata, pinnis impari-pinnatis.* Flores *paniculati, violacei.* Calyx *sæpius cyathiformis, nunc breve campanulatus vel subcylindricus dentibus obsoletis.* Corollæ *æstivatio imbricata, labio superiore breviore bilobo equitante inferius, cujus lobus medius major, indivisus, lateralibus tectus.* Stamina *antherifera inclusa:* Antheræ *sæpius dimidiatæ, cum rudimento nano lobi alterius: nunc completæ loculis æqualibus divaricatis apice solum connexis.* BROWN Mscr.

JACARANDA. *Juss. Gen.* 188.

Specific Character.

JACARANDA *ovalifolia;* antheris dimidiatis, corollis extus sericeis, foliolis pubescentibus; lateralibus ovalibus cum mucrone; terminali lanceolato. BROWN Mscr.

" JACARANDA *ovalifolia* is very nearly related both to J. *acutifolia* and J. *obtusifolia* of HUMBOLDT and BONPLAND (*Plant. æquinort. tab.* 17 *and* 18,) between which it may be placed. J. *acutifolia* differs from it chiefly in all the leaflets being lanceolate, and in having a smaller number of pinnæ. J. *obtusifolia* is still more distinct in its leaflets entirely wanting the mucro, which is both obvious and constant in our plant, and in having a smooth corolla. J. *bahamensis* Nob. (J. *caroliniana* PERSOON; BIGNONIA *cærulea.* Lin.) of which there is in the Banksian Herbarium a single imperfect specimen that may be supposed to be authentic, and J. *rhombifolia* of MEYER (*Flor. Essequeb.* 213.) which is

probably not different from the plant found by the late Dr. Anderson of St. Vincent on the banks of the Essequebo, and cultivated in some of the gardens under his name of Bignonia *filicifolia*, are easily distinguished from the three species already mentioned, by their rhomboidal leaflets, and from each other by differences in the surface of corolla, which is silky in I. *bahamensis* and smooth in J. *rhombifolia*.

I. *procera* Nob. (Bignonia *Copaia*. Aublet, B. *procera* Willd.) is sufficiently different from all the others in the much greater size of its leaflets which are frequently upwards of an inch in length; in the rachis of the pinnæ not being winged; and in the cylindrical calyx, of which the teeth are extremely minute.

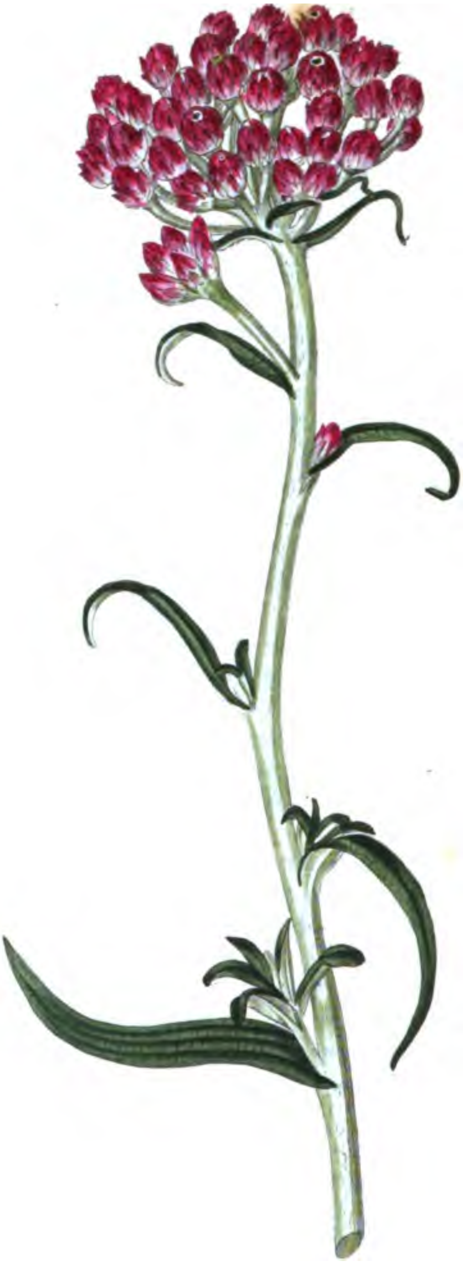
In five of the above mentioned species, I have ascertained that the antheræ are dimidiate, with a hardly visible rudiment of a second lobe; a structure which M. Meyer (l. c.) has expressed by "Antheræ simplices," and introduced into his character of the genus. But in an undescribed species lately found in Brazil (J. *tomentosa* Nob.) they are perfect, consisting of two equal divaricate lobes, as in the greater part of the natural order. This species differs indeed from the rest of the genus in its leaves having constantly a terminal pinna. It agrees with them, however, in all the other characters of the flower, and entirely in the structure of its fruit; it can therefore be regarded as forming only a section of a strictly natural and well defined genus, still depending on characters not materially different from those proposed for it by M. de Jussieu; the only doubtful species being the Jacaranda 2, of Piso, from which the generic name was adopted." Brown.

For the above elaborate account of the genus Jacaranda and its known species, which we doubt not will be highly acceptable to the botanical world; we are indebted to our friend Mr. Robert Brown.

Our drawing was made in April last, from a fine plant that flowered, probably for the first time in this country, in the grand collection of the Count de Vandes, at Bayeswater. Native of tropical South America, and requires to be kept in the stove.

The outline figures shew, 1. the stamens with the remarkable barren filament, 2. the germen, style and calyx.

N.º 2328.



wrby. Del. Pub. by S. Curtis. Walworth July. 1. 1822 Weddell Sc.

GNAPHALIUM CONGESTUM. COMPACT-FLOWERING GNAPHALIUM.

****

Class and Order.

SYNGENESIA POLYGAMIA SUPERFLUA.

Generic Character.

Recept. nudum. *Pappus* pilosus s. plumosus. *Cal.* imbricatus, squamis marginalibus rotundatis, scariosis, coloratis.

Specific Character and Synonyms.

GNAPHALIUM *congestum;* fruticosum, foliis lanceolatis sessilibus trinerviis supra nudis subtus lanuginoso-tomentosis, corymbo coarctato-capitato. *Willd. Sp. Pl.* 3. *p.* 1852.

GNAPHALIUM *congestum;* fruticosum? foliis lineari-lanceolatis superne rugoso-scabris subtus tomentosis, corymbo glomerato simplici. *Lam. Encycl.* 2. *p.* 741. *Bot. Reg.* 243.

GNAPHALIUM *tricostatum;* foliis oblongo-lanceolatis tomentosis trinervibus: margine revoluto, capitulis paniculatis, caule fruticoso erecto. *Thunb. Prodr.* 151?

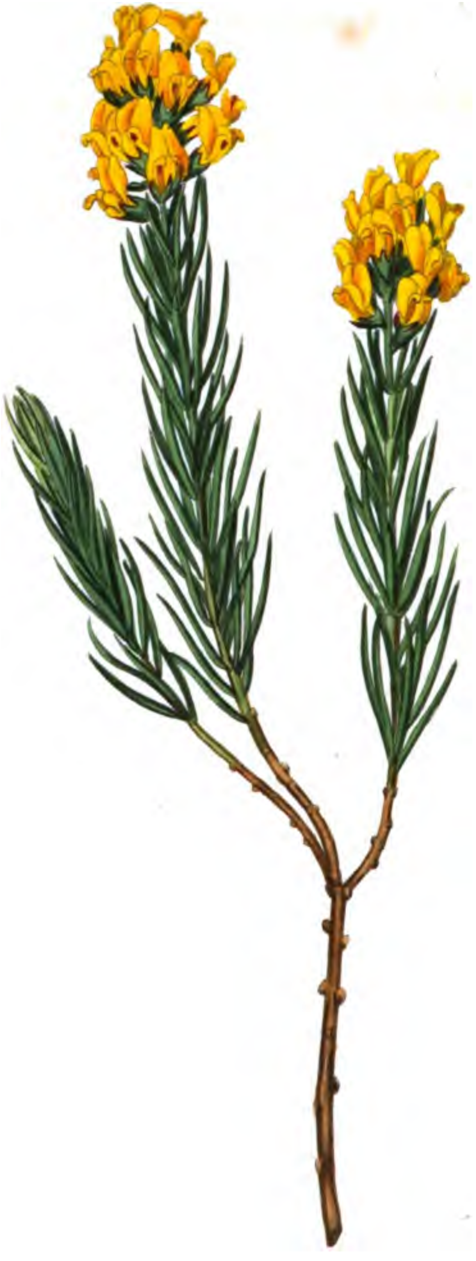
ELICHRYSUM capense Pedis Cati folio et facie. *Petiv. Gazoph. t.* 82. *f.* 3. *et* 4?

DESCR. *Stem* shrubby, erect, covered with a white woolly tomentum. *Leaves* linear-lanceolate, sessile, three-or-five-nerved; on the upper side dark green, rugose; on the under white, woolly; margins reflected. *Flowers* for the most part in a compact panicle; *calycine scales* white, tipped with bright red: *florets* yellow.

Though a straggling shrub, yet the brilliant colour of the tips of the leaflets of the calyx has a pleasing effect, especially before these are fully expanded. Has been many

years an inhabitant of our greenhouses, but not recorded in either edition of the Hortus Kewensis. Native of the Cape of Good-Hope, and only requires to be protected from frost and guarded against damps, which are particularly injurious to most woolly plants. Supposed to be introduced by Mr. FRANCIS MASSON in 1791.

N.2329.



Syd. Edwards Del. [illegible] Curtis Walworth [illegible] [illegible]

ASPALATHUS CALLOSA. OVAL SPIKED ASPALATHUS.

****

Class and Order.

DIADELPHIA DECANDRIA.

Generic Character.

Cal. 5-fidus: lacinia superiore majore. *Legumen* ovatum, muticum, subdispermum.

Specific Character and Synonyms.

ASPALATHUS *callosa;* foliis trinis subulatis æqualibus, stipulis subrotundis callosis, floribus spicatis glabris. *Sp. Pl.* 1002. *Berg. Pl. Capens.* 209.

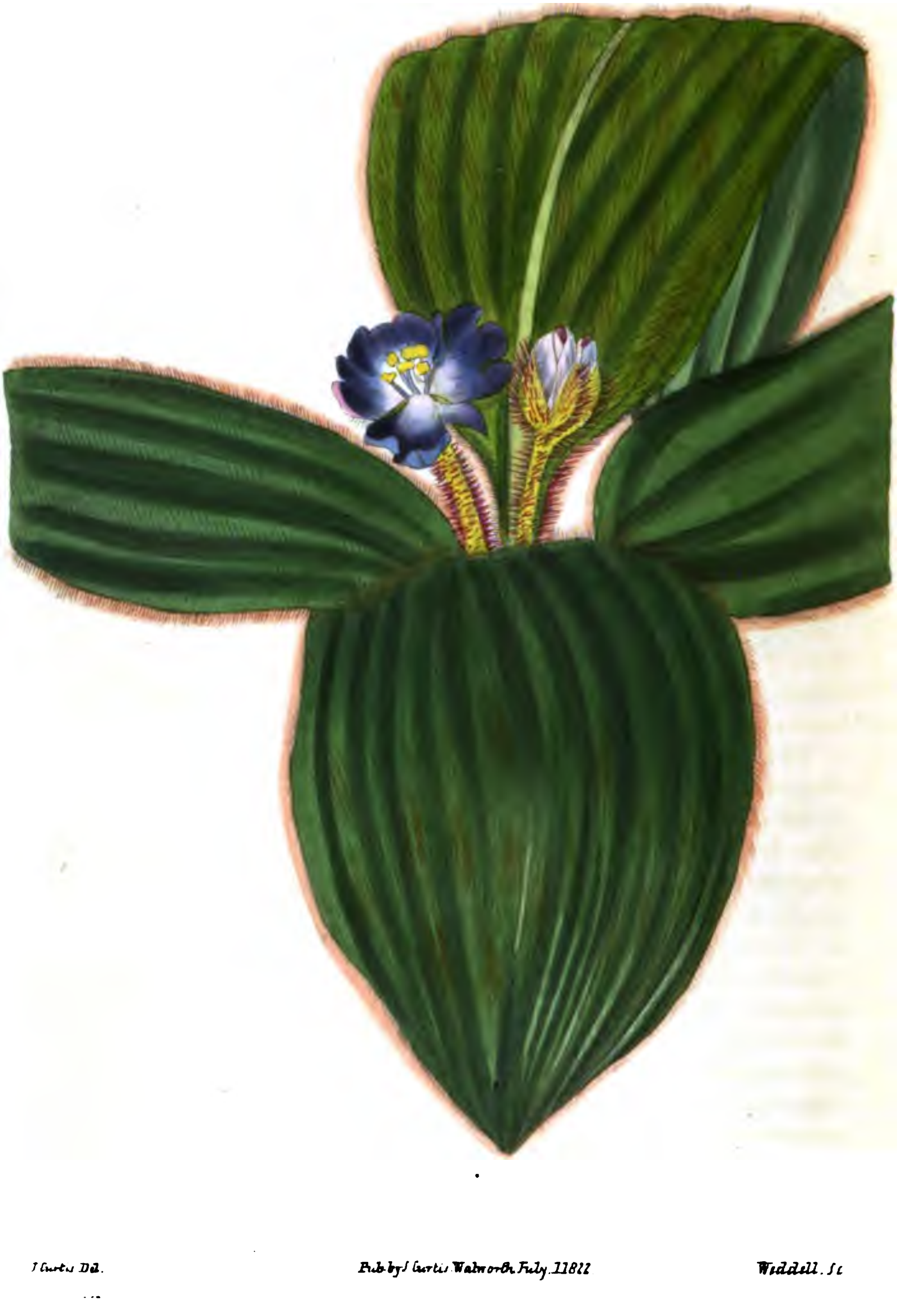
ASPALATHUS *callosa;* foliis ternis trigonis, spicis ovatis. *Thunb. Prodr.* 125. *Willd. Sp. Pl.* 3. *p.* 966.

CYTISUS trifoliatus, juniperinis foliis, floribus luteis in spicam densiorem adactis, Prom. bonæ spei. *Pluk. Mant.* 63. *t.* 345. *f.* 4.

This shrub has its specific name from the round, callous stipules that grow at the base of the leaves and remain after these fall off, giving the branches a warty appearance. The leaves grow by threes, but are so much crowded together that they seem to be without order. The erect position of the alæ and carina with the curved extremities of the former give the flower a very singular appearance.

ASPALATHUS *callosa* is not recorded in the Hortus Kewensis and is very rarely met with in our collections. Native of the Cape of Good-Hope and requires the protection of the greenhouse. Flowers in August. Communicated several years ago by Messrs. LODDIGES and SONS.

N. 2330.



J Curtis Del.　　Pub by J Curtis Walworth July 1 1822　　Weddell. Sc

TRADESCANTIA FUSCATA. STEMLESS SPIDER-WORT.

****

Class and Order.

HEXANDRIA MONOGYNIA.

Generic Character.

Cal. 3-phyllus. *Petala* 3. *Filamenta* villis articulatis. *Caps.* 3-locularis. *Sem.* papilla embryotega instructa.

Specific Character and Synonyms.

TRADESCANTIA *fuscata;* acaulis, hispida, foliis oblongo-ovatis multinerviis, scapis sub-trifloris.

TRADESCANTIA fuscata. *Lodd. Bot. Cab.* 374. *Bot. Reg.* 482.

TRADESCANTIA *fuscata* is at once distinguished from all the known species by the difference in its habit; the leaves being all radical, and the flowers coming up immediately from the roots, on leafless scapes generally about three in succession on each.

It has its name from the brownish red hairs with which the whole plant, except the corolla, is covered.

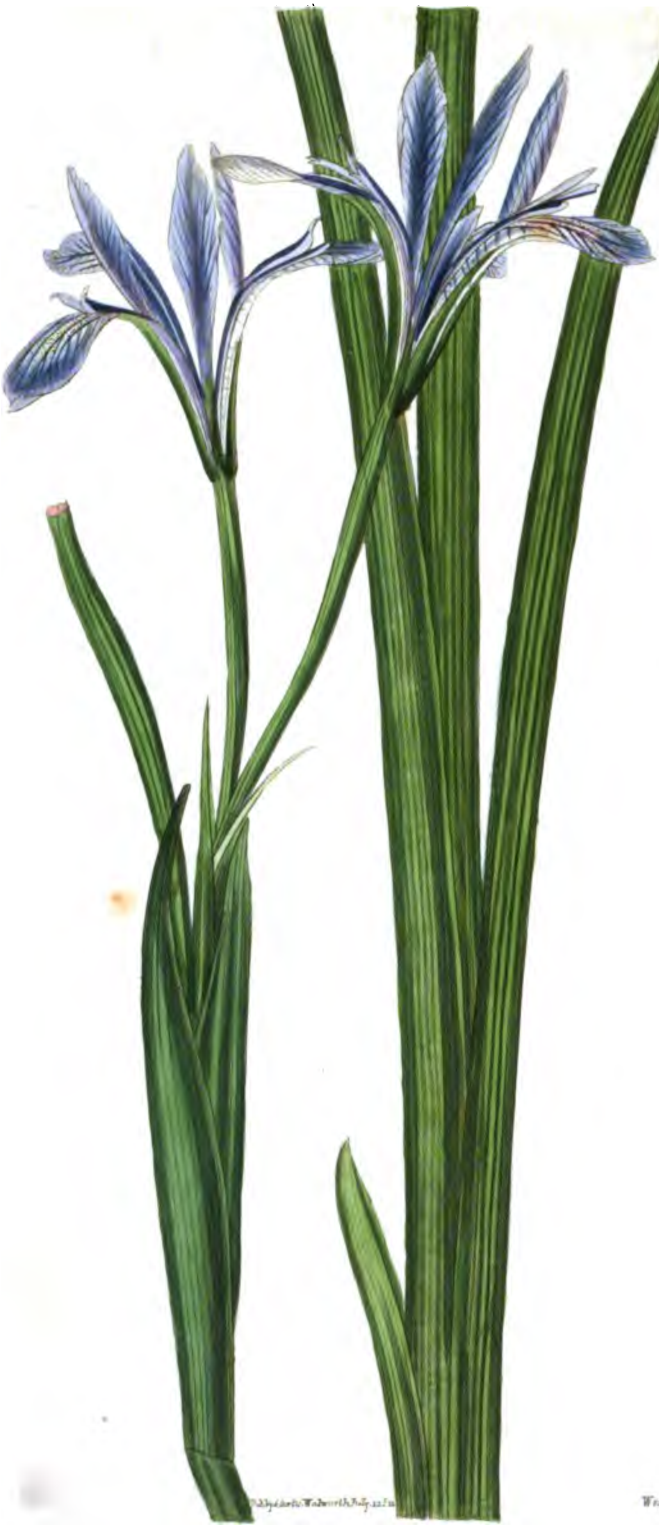
In JUSSIEU's natural orders TRADESCANTIA is inserted with the *Junceæ* from which Mr. BROWN has very advantageously separated it, by establishing the natural order of *Commelineæ* (vide Prodr. Floræ Nov. Holl. p. 268.)

This genus, as well as several others, it has been observed by Sir JAMES E. SMITH, militates very strongly against JUSSIEU's theory, that no monocotyledonous plants can have a corolla; and though his followers endeavour to get over the objection, by calling what is most evidently a corolla by the name of interior laciniæ of the calyx, yet, to our apprehension, no plant has both a calyx and corolla more decidedly distinct than all the species of TRADESCANTIA.

And it is only in compliance with an hypothesis that they can be otherwise denominated.

Native of Brazil. Requires to be kept in the stove. Introduced about three years since. The first account we have of it is in the Botanical Cabinet of our friends Messrs. Loddidges and Sons. It seems for the most part to produce imperfect blossoms; for in the Cabinet the flower is represented as large as that of the common Spider-wort, and with nearly entire margins; but we have never been fortunate enough to meet with it in so perfect a state.

N.2331



Pub. by S. Curtis, Walworth, July 1. 18

Weddell sc.

IRIS PALLASII, β. CHINENSIS. PALLAS'S CHINESE IRIS.

****

Class and Order.

TRIANDRIA MONOGYNIA.

Generic Character.

Cor. 6-partita: laciniis alternis reflexis. *Stigmata* petaliformia.

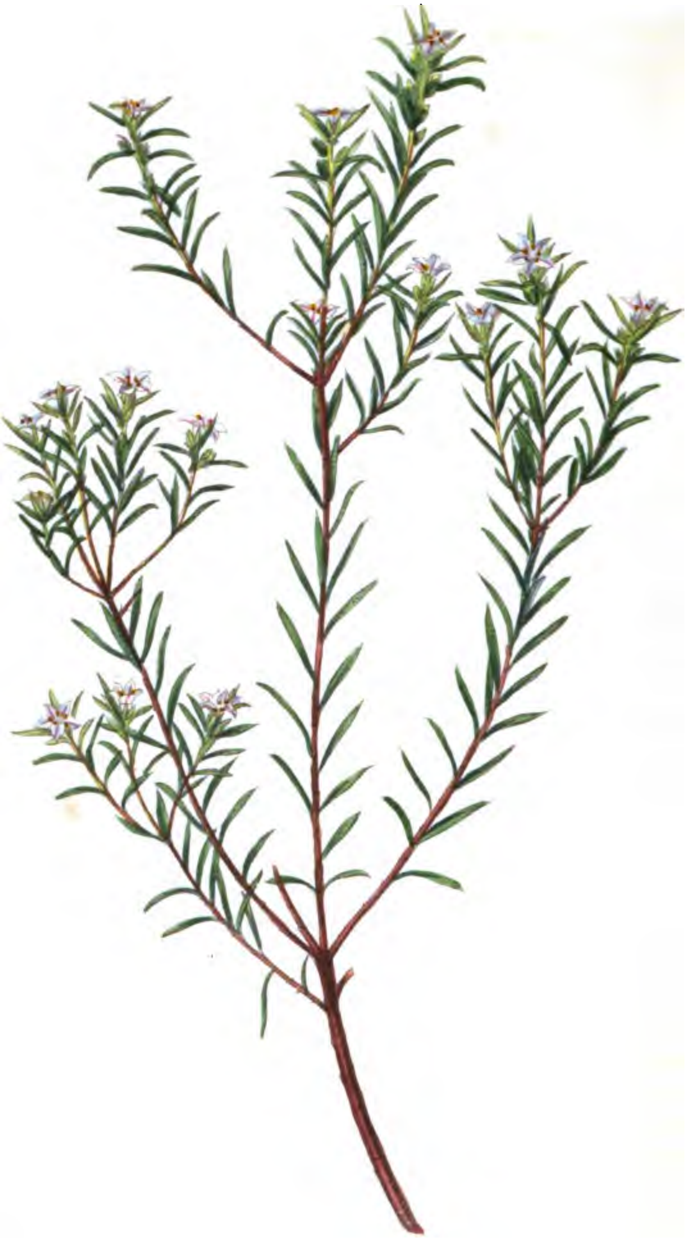
Specific Character and Synonyms.

IRIS *Pallasii;* imberbis, foliis ensiformibus conduplicatis striatis apice incurvis, germinibus longissimis lirato-cylindricis, stigmatibus carinatis apice serrulatis.
IRIS *Pallasii,* β. chinensis. *Fischer, ex ore ipsius.*
ZY-JUI-LAN, *Mongolensium.*

DESCR. *Leaves* narrow-sword-shaped, folded, striate, hooked at the point, erect, shorter than flowering-stem. *Spathe* acute, green, three-flowered. *Flowers* pale blue. *Tube* funnel-shaped, green. *Claw* of the *deflected petals* twice the length of the oval streaked *lamina,* green on the outside with purplish margins: *Claw* of the *upright petals* filiform, *lamina* lanceolate. *Stigmas* not exceeding the claw of the deflected petal in length, bifid, and minutely serrate at the extremity, deep violet coloured at the keel with white margins. *Germen* an inch and half long, nearly cylindrical, obtusely six-grooved.

Communicated by Mr. ANDERSON from the Chelsea garden, in May 1820, where it was raised from seeds sent by Dr. FISCHER from Gorenki; who informed us, on his late visit, that there are two varieties of which this is his IRIS *Pallasii,* β. chinensis. Native of Chinese Mongolia. A hardy perennial.

N. 2332.



Pub. by S. Curtis Walworth July 1. 1822 Weddell sc.

DIOSMA ERICOIDES. SWEET-SCENTED DIOSMA.

****

Class and Order.

PENTANDRIA MONOGYNIA.

Generic Character.

Cor. 5-petala. *Nectaria* 5, supra germen. *Caps.* 3, *s.* 5, coalitæ. *Semina* calyptrata.

Specific Character and Synonyms.

DIOSMA *ericoides;* foliis lineari-lanceolatis subtus convexis bifariam imbricatis. *Sp. Pl.* 287. *Mill. ic.* 1. *p.* 84. *t.* 124. *f.* 2.
DIOSMA *ericoides;* foliis trigonis obtusis glabris floribus terminalibus subsolitariis. *Willd. Sp. Pl.* 1. *p.* 1135. *Thunb. Prodr.* 43? *Hort. Kew. ed. alt.* 2. *p.* 30.
DIOSMA foliis setaceis acutis. *Hort. Cliff.* 72. *n.* 3.
SPIRÆA africana lariceis foliis floribus albis, *Buchu* Hottentottorum. *Raj. Dendr.* 91.
ERICÆFORMIS Coridis folio æthiopica, floribus pentapetalis in apicibus. *Pluk. Amalth* 236. *t.* 279. *f.* 5.

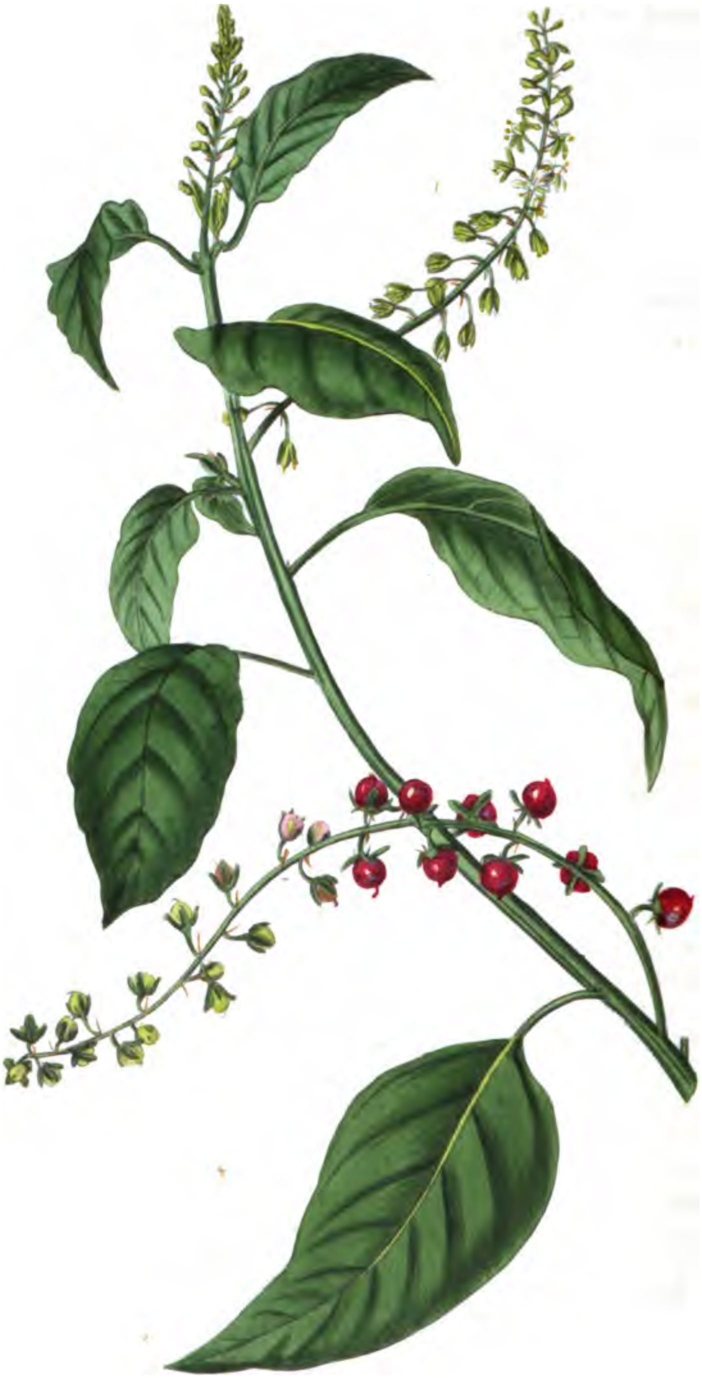
The DIOSMA *ericoides;* is a low branched shrub, bearing a few small white flowers at the extremities of the branches. The leaves, when rubbed, give out a very aromatic, pungent odour, which has no admixture of the foxy smell so offensive in several species of the genus.

From the leaves of this shrub the Hottentots prepare a powder which they call Buku; with this powder mixed with grease they anoint themselves for the sake of the perfume. It is supposed that the Hottentots use for this purpose indiscriminately the leaves of several species of Diosma; but the powder prepared from one particular kind is said to be much more highly prized than the rest; in so much that a very small quantity, less than a thimble full, is said to be of the value of a sheep. As the leaves of Diosma *ericoides* possess a stronger, more fragrant and aromatic quality than perhaps those of any other species, it is probably the very one that is thus highly prized.

As both Bergius and Thunberg describe the leaves of their plant as obtuse, which, in the Hortus Cliffortianus, are said to be acute, it is probable that these authors described a different species; on which account we have entirely omitted the synonym of the former, and marked that of the latter as doubtful.

Native of the Cape of Good Hope. Requires to be protected from frost. Cultivated by Mr. Philip Miller in 1756. Flowers from March to September. Communicated by N. Hodson, Esq. from the Botanic garden at Bury St. Edmunds.

N.2333.



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Weddell [illegible]

RIVINA LÆVIS. SMOOTH RIVINA.

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Class and Order.

TETRANDRIA MONOGYNIA.

Generic Character.

Cal. 4-phyllus, persistens. *Cor.* 0, nisi corollam sumas. *Bacca* 1-sperma: *Semine* lentiformi.

Specific Character and Synonyms.

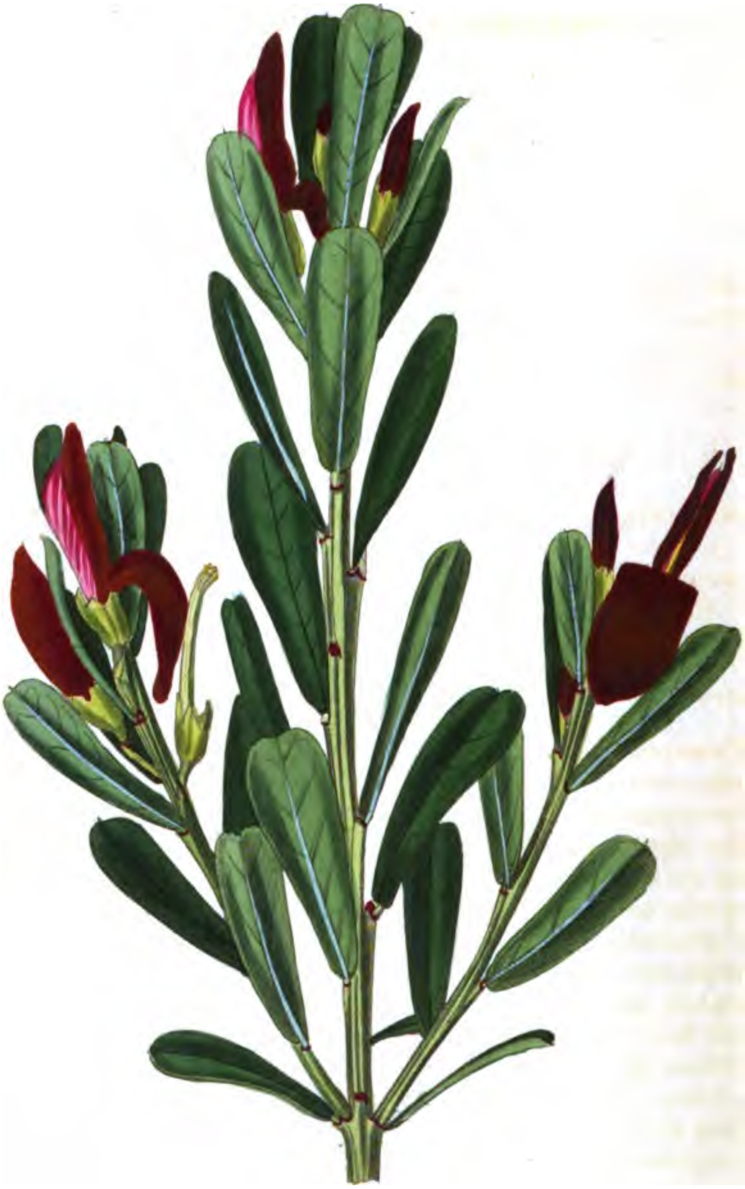
RIVINA *lævis;* racemis simplicibus, floribus tetrandris, foliis ovatis acuminatis glabris planis, caule tereti. *Willd. Sp. Pl.* 1. *p.* 694. *Hort. Kew. ed. alt.* 1. *p.* 273.
RIVINA *lævis;* racemis simplicibus, floribus tetrandris, foliis glabris. *Lin. Mant.* 51. *Kniph. Cent.* 2. *Lam. illustr. t.* 81. *f.* 2.
RIVINA *humilis;* foliis ovatis-lanceolatis glabris. *Mill. Dict. n.* 1. non Linnæi.
PIERCEA foliis ovato lanceolatis glabris. *Mill. Dict. ed.* 7.
SOLANOIDES Americana, circææ foliis glabris. *Tournef. Act. Paris.* 1706.

RIVINA *lævis* is especially distinguished from *humilis* (supra No. 1781.) by the smoothness of the whole plant and the brighter green colour of its leaves. It has the same valuable property as that species, of bearing its beautiful scarlet fruit, at the same time with the flowers, through the greatest part of the year.

The berries are of the same colour with those of Rivina *humilis* and possess probably the same qualities. We wish some one who cultivates these plants would repeat the experiment of MILLER mentioned above in our account of the last named species, and compare the effect with that of some other deep coloured juices, particularly with the berries of Phytolacca *decandra.*

Native of the West-Indies and requires to be kept in an airy and light part of the stove. Flowers most part of the year. Cultivated by Mr. PHILIP MILLER in 1733. Communicated by the COUNT DE VANDES.

N.2334.



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TEMPLETONIA RETUSA. WEDGE-LEAVED TEMPLETONIA.

****

Class and Order.

DIADELPHIA DECANDRIA.

Generic Character.

Cal. ebracteatus, 5-dentatus, dentibus parum inæqualibus. *Carina* oblonga. *Stam.* omnia connexa, antheris uniformibus. *Legumen* pedicellatum, plano-compressum, polyspermum. *Semina* strophiolata.

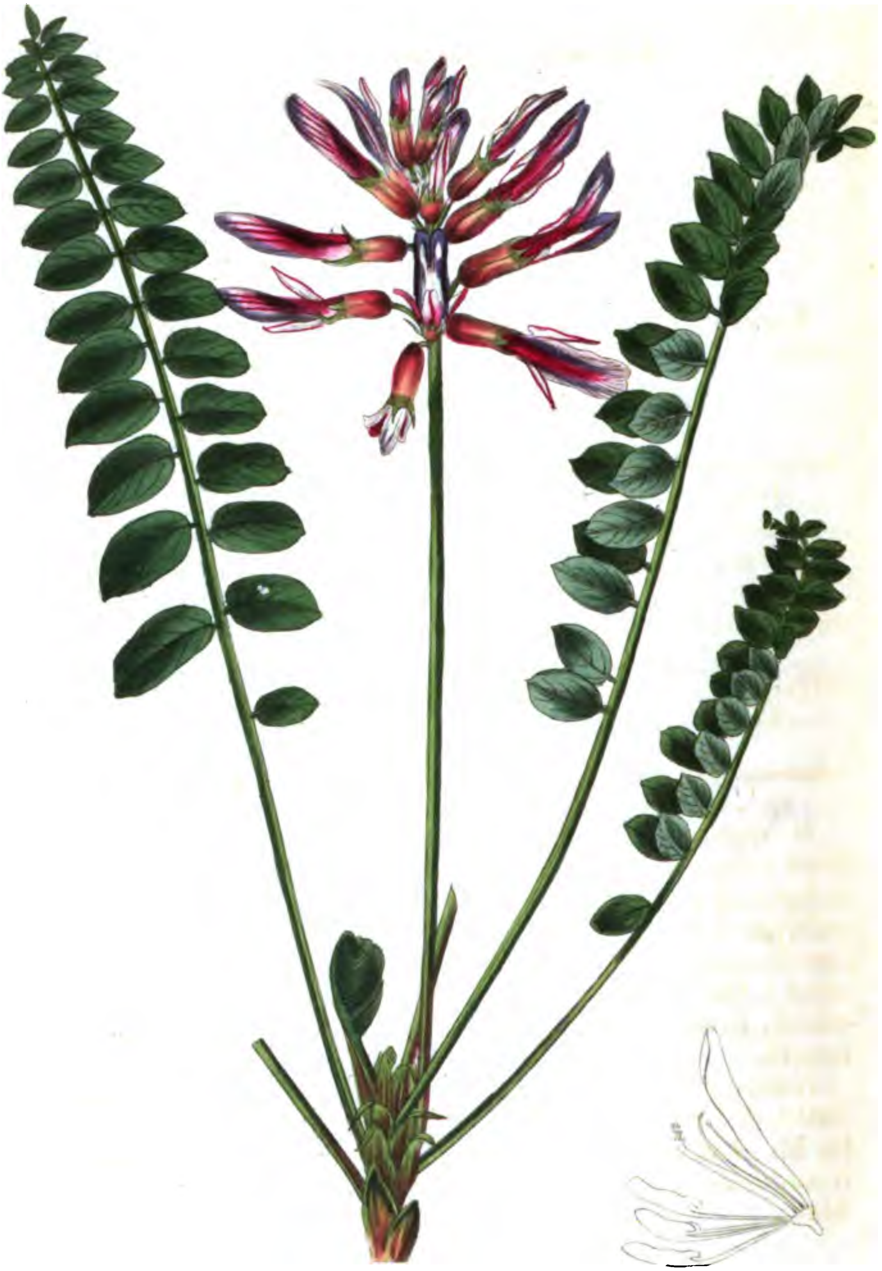
Specific Character and Synonyms.

TEMPLETONIA *retusa;* bracteis a calyce remotis, vexillo reflexo, staminibus monadelphis.
TEMPLETONIA retusa. *Hort. Kew. ed. alt.* 4. *p.* 269. *Bot. Reg.* 383.
RAFNIA retusa. *Venten. Malmais.* 53?

TEMPLETONIA *retusa* and *glauca* (supra No. 2088,) are so nearly related, as to render it dubious whether they ought to be regarded as distinct species, or only as varieties. But if the characters by which we have attempted to establish them as distinct species, should be found to be constant, they may safely be considered as such. In *glauca* the leaves are glaucous, in *retusa* dark green; in the former the bractes are inserted close to the calyx, the vexillum is not reflected, the stamens are partly at least diadelphous; in the latter the bractes are in the middle of the peduncle, the vexillum is entirely reflected, and the stamens are monadelphous. It seems difficult to decide to which species the Rafnia *retusa* of VENTENAT should be referred; for while his description accords best with our present plant, his figure more nearly resembles that of *glauca*, both in the colour of the leaves and the unreflected vexillum.

An evergreen shrub, native of the south-west coast of New Holland, where it was first detected by Mr. Robert Brown. Requires to be protected from frost. Flowers in the spring and summer months. Communicated by Messrs. Loddiges and Sons.

N.2335.



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Weddell Sc.

ASTRAGALUS BRACHYCARPUS. SHORT-FRUITED ASTRAGALUS.

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Class and Order.

DIADELPHIA DECANDRIA.

Generic Character.

Legumen plerumque biloculare, gibbum. *Semina* biserialia.

Specific Character and Synonyms.

ASTRAGALUS *brachycarpus*; acaulis, foliis ellipticis pubescentibus, scapis racemosis folio longioribus, leguminibus obovatis calycis longitudine. *M. Bieb. Flor. taurico-caucas.* 2. *p.* 201. *et* 3. *p.* 498. *Ejusdem. Cent. plant. rar. Ross.* 2. 58. inedit.

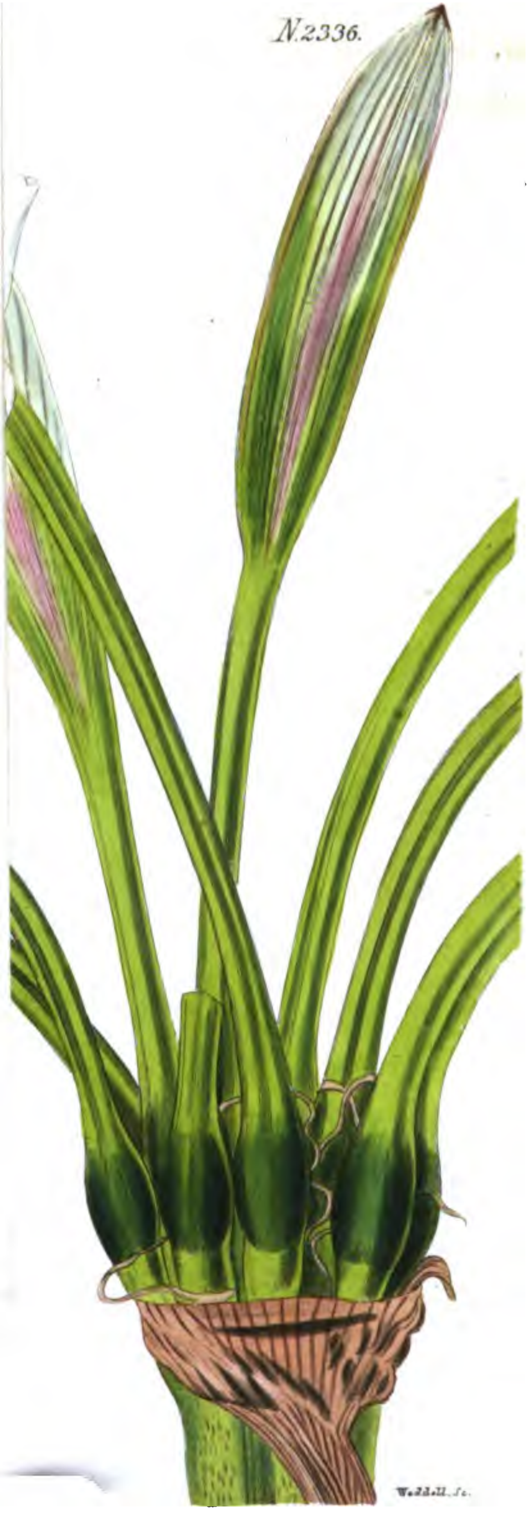
ASTRAGALUS humilis Serpylli foliis. *Buxb. Cent.* 3. *p.* 21. *t.* 38.

ASTRAGALUS orientalis Nummulariæ folio glabro. *Tournef. Coroll.* 28?

It appears, from a specimen of this species which we have received from Dr. FISCHER, that in its native soil it is both of humbler growth and more pubescent than in its cultivated state. It approaches near to Astragalus *monspeliensis*, (supra No. 375,) but has rounder leaflets and is more erect; the most important difference is in the legumen, which, in the present species scarcely exceeds the calyx in length.

Native of Caucasus near the Constantine-mountain hot-baths, and on the sides of Mount Beschtan. Communicated by Mr. ANDERSON from the Chelsea garden, who raised it from seeds sent by Dr. FISCHER from Gorenki. Flowers in May.

N.2336.



Weddell. ſc.

(2336)

CRINUM HYBRIDUM ERUBESCENTE-CAPENSE. HYBRID ERUBESCENT CAPE CRINUM.

****

Class and Order.

HEXANDRIA MONOGYNIA.

Generic Character.—Vide supra No. 2292.

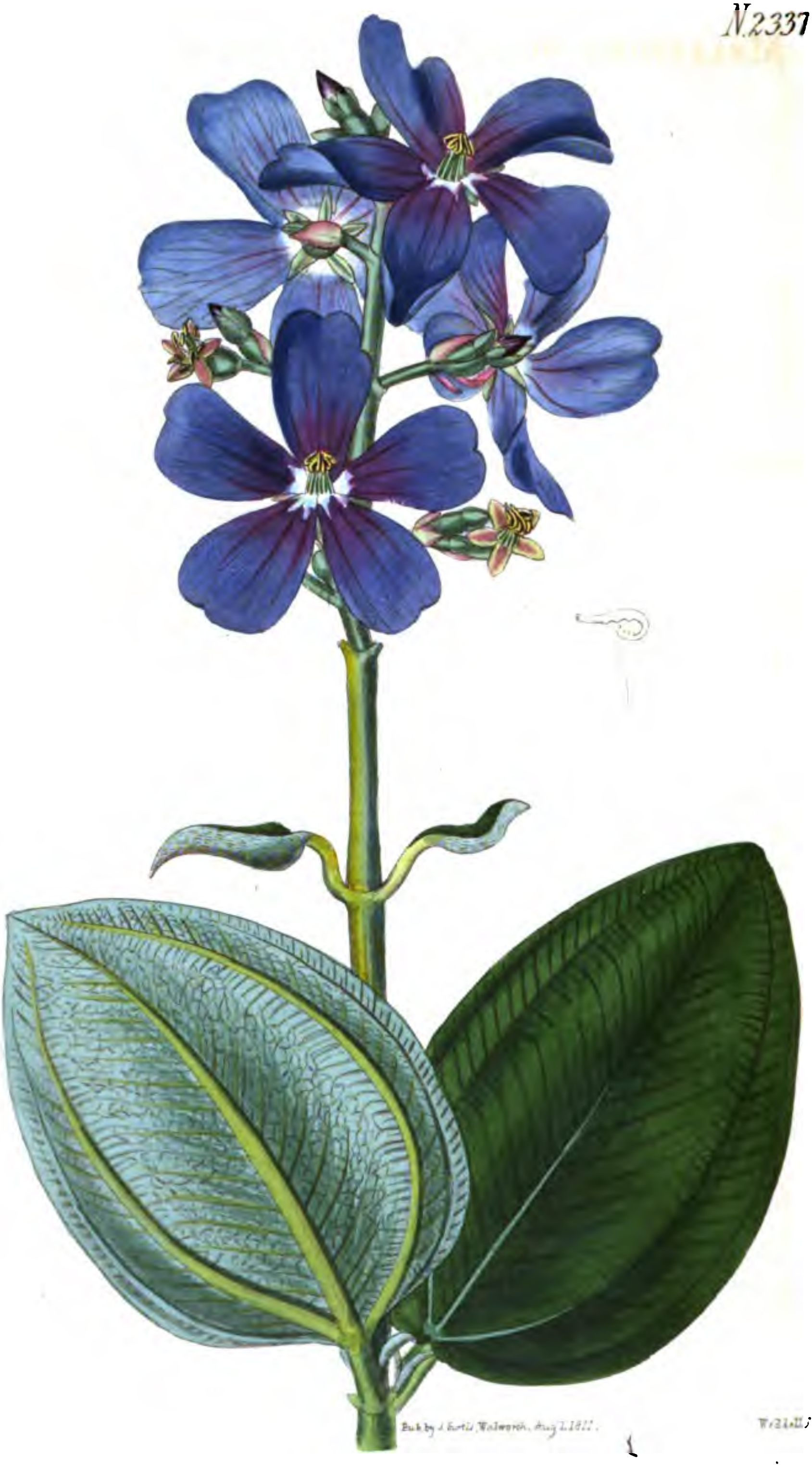
Hybrid Character.

CRINUM *hybridum erubescente-capense;* foliis acutis sub 7-pedalibus 5 uncias latis, saturate viridibus, margine scabro; scapo 4-pedali basi purpurascente; germine viridi breviter pedunculato; tubo flaccide curvato viridi 5-unciali; laciniis 3½-uncialibus albis rubro pallidè striatis, interioribus unciam, exteris ¾ latis; filamentis assurgenter curvatis limbo brevioribus, basi sub-gibbosâ.

DESCR. Circumference of the neck of the bulb 10 inches. *Leaves* 18, the longest near seven feet long, acute, deep green, 5 inches wide, with a rough margin. *Scape* 4 feet high, purple near the base. *Peduncles* ¼ of an inch long, green. *Germen* green. *Cells* with about 14 ovules. *Tube* green, curved, 5 inches long. *Limb* white, striped chiefly on the outside with red, 3 and ½ inches long, the inner an inch, the outer ¾ wide. *Filaments* with the points curved upwards like fishhooks, red towards the extremity. *Style* as well as the longest filaments about an inch shorter than the limb, a little knobbed at their insertion. *Flowers* about eleven nearly resembling those of C. *capense* in fragrance and expansion.

The bulb which produced our specimen was raised at Spofforth from seed of C. *capense* ripened in a pond in the garden in the autumn of 1818, the stigma having been impregnated by the pollen of C. *erubescens* v. *major,* and it flowered for the first time in April 1822, in the stove of the EARL OF CARNARVON, to whom it had been given. Some of the plants raised from the same pod, together with several other mules of which *capense* is the mother, have endured the two last winters, without any protection, in an open and unsheltered part of the garden. The size of the plate renders it impossible to give an accurate representation of this fine plant. Its leaf is only distinguishable by the point which is a little less acute from that of C. *longiflorum, Appendix* p. 11 & 23. *Bot. Reg.* p. 303. C. *capense* has from 27 to 31 ovules in a cell; C. *erubescens* about 5; C. *erubescente-capense* about 14; C. *longiflorum* from 9 to 11. The same gibbosity and connecting membrane at the insertion of the filaments is found in *longiflorum* and in our mule which derives it from *erubescens*. It is chiefly distinguishable from *longiflorum* by the flaccid curvature of the tube in which it follows C. *capense*, by shorter peduncles and blunter leaves. In expansion, breadth of petals, and number of flowers this mule conforms with the female parent. W. H.

N.2337.



Pub. by J. Curtis, Walworth, Aug. 1. 1822.

Weddell sc.

MELASTOMA HETEROMALLA. WOOLY-LEAVED MELASTOMA.

****

Class and Order.

DECANDRIA MONOGYNIA.

Generic Character.

Cal. 5-fidus, campanulatus. *Petala* 5, calyci inserta. *Bacca* 5-locularis, calyce obvoluta.

Specific Character.

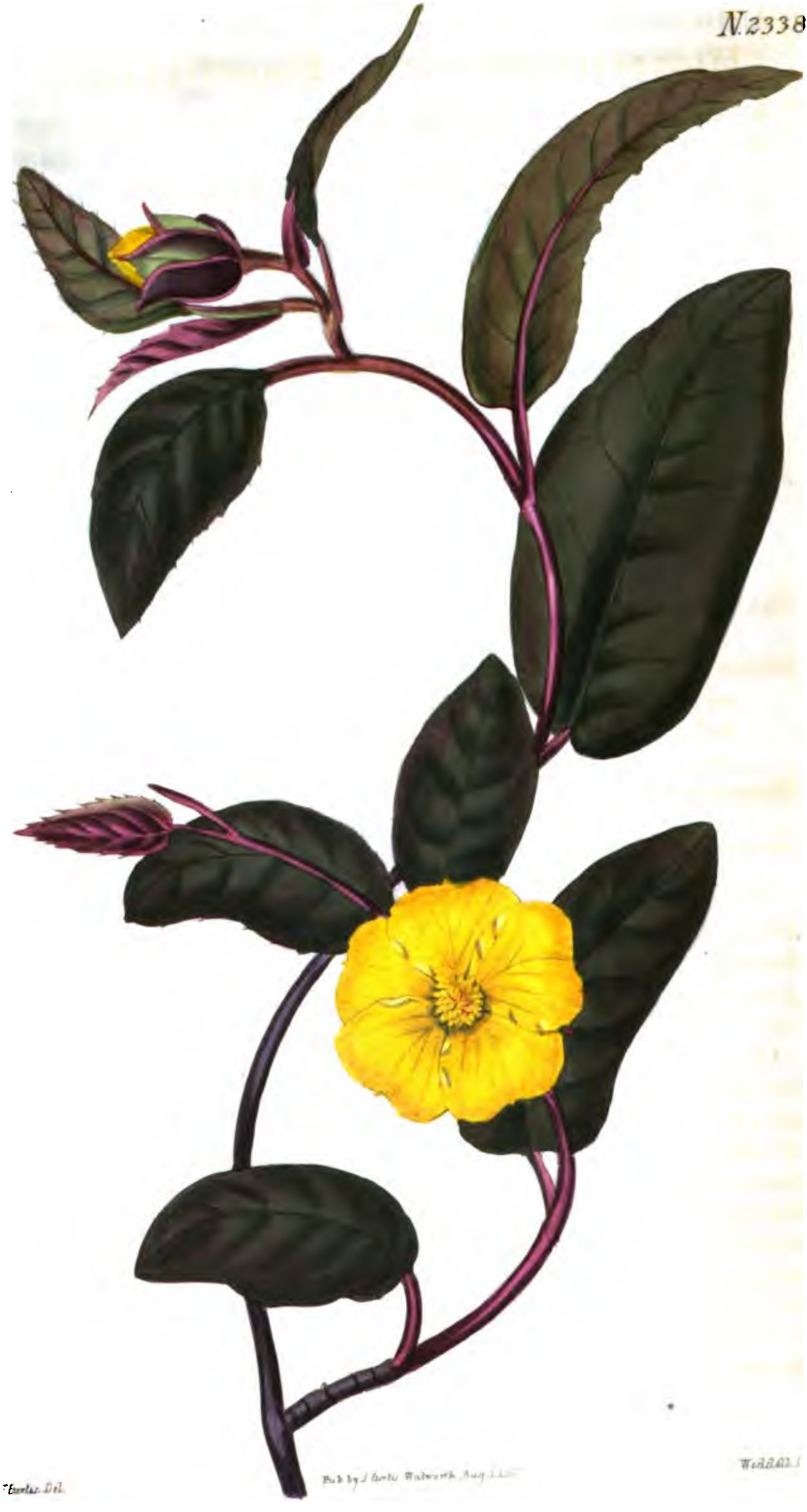
MELASTOMA *heteromalla;* foliis cordato-ovalibus integerrimis petiolatis subtus flocculoso-lanatis, calycis limbo membranaceo caduco, petalis obcordatis, antheris basi arcuatis. *Don Mscr.*

DESCR. *Stem* shrubby, straight, robust, four-sided, three-or-four feet high, densely pubescent; two of the sides convex, the others plane, covered at the lower part with a brownish bark, and throwing out near the top several short thickish silky branches. *Leaves* opposite, petioled, broad-cordate oval, quite entire, 5-nerved and reticulately veined, from four to seven inches long, and from three to five broad, covered underneath with a dense, white, flocculent wool; upper surface green, with numerous adpressed bristly hairs, giving a silky hue to the young leaves. *Panicle* terminal, many-flowered, decussately branched: *branches* short, thick, stiff, silky. *Peduncles* short, bifid or trifid. *Flowers* violet-coloured on very short pedicles, which are furnished at the base with two small, coloured, membranous, caducous scales. *Calyx* oblong, tubular, five-sided, silky-pubescent: *limb* five- rarely six-parted, membranous, reddish, generally falling off with the petals: segments oblong, obtuse. *Petals* five, or rarely six, obcordate. *Sta-*

mens ten, rarely twelve, inserted, on the margin surrounding the mouth of the calyx: *filaments* slender, cylindrical, white: *anthers* long, subulate, yellowish, arcuate, almost convolute at the base, opening at the top with a single pore. *Style* cylindrical, equal, curved towards the top: *stigma* small, simple, minutely bearded, pale yellow. *Capsule* oblong-ovate, berried, five-celled, five-valved, rarely 6-celled, 6-valved, opening in the centre of each cell with an oblong fissure. *Seeds* numerous, reniform, globose, dotted. *Don Mscr.*

This very beautiful species of MELASTOMA is a native of Brazil. Flowered first in this country as we are informed at Sion House. Our drawing was taken in March last at the fine collection of the COMTESSE DE VANDES, Bayswater.

N. 2338.



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Weddell sc.

HIBBERTIA DENTATA. BROWN-LEAVED HIBBERTIA.

Class and Order.

POLYANDRIA POLYGYNIA.

Generic Character.

Cal. 5-phyllus, in fructu connivens. *Petala* 5, decidua. *Capsulæ* plurimæ (1—15) glomeratæ.

Specific Character and Synonyms.

HIBBERTIA *dentata ;* foliis ovato-oblongis ; aristulato-dentatis, floribus trigynis pedunculatis, caule volubili.

HIBBERTIA *dentata ;* foliis oblongis acuminatis glabris aristulato-serratis, floribus pedunculatis trigynis, caule volubili. *De Cand. Syst. Nat. Veg.* 1. *p.* 426. *Bot. Reg.* 282.

HIBBERTIA dentata. *R. Brown ined. Lodd. Cab.* 347.

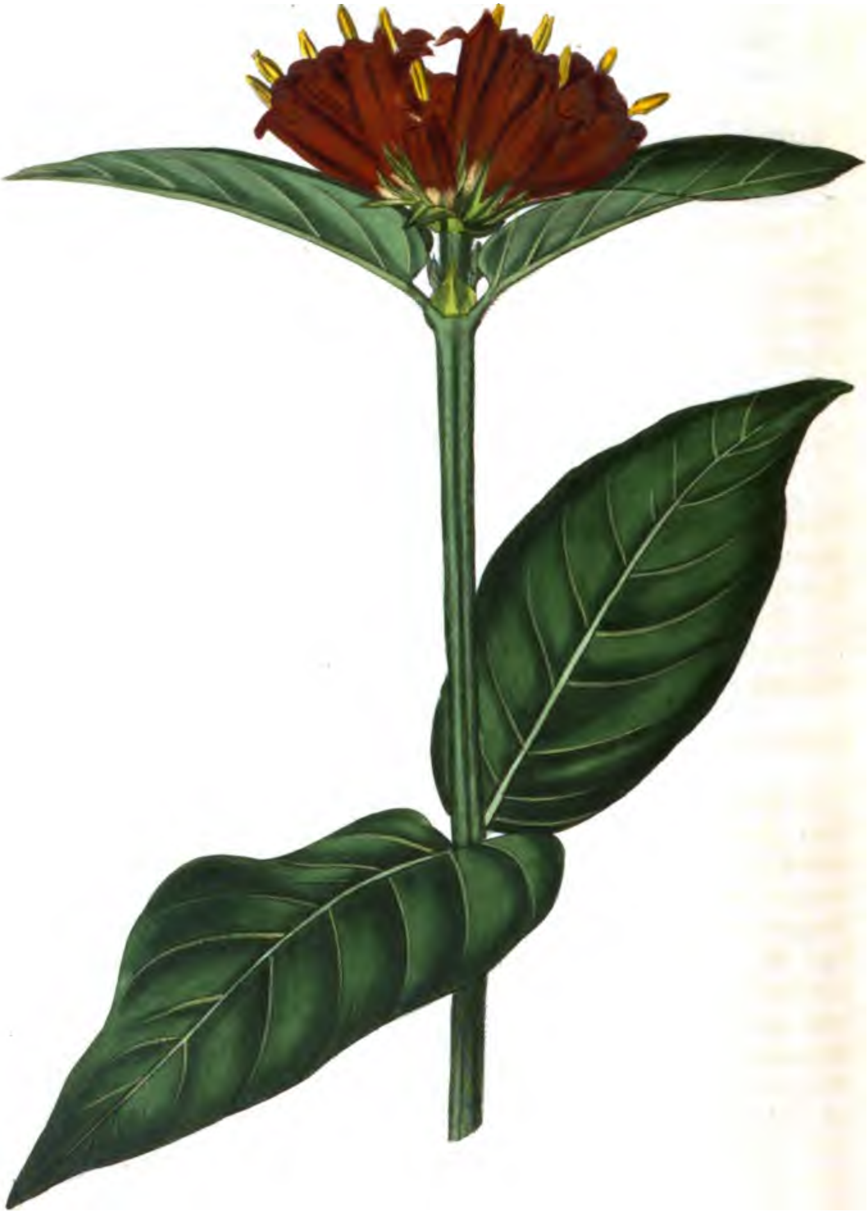
The genus HIBBERTIA belongs to the natural order of *Dilleniaceæ* of DE CANDOLLE, an order first proposed by SALISBURY in the Paradisus Londinensis. Most of the genera of this order had been joined by JUSSIEU either to his order of *Magnoliæ,* or that of *Rosaceæ.*

HIBBERTIA *dentata* is a climbing shrub and if planted in the border of a conservatory, to which it is well suited, will, if properly supported, in a few years attain the height of six or eight feet. It produces abundance of bright yellow flowers, which contrast beautifully with the dark brown foliage amongst which they are seated. In cultivation it is principally on the younger leaves that the denticulation is observable, the full grown ones being either quite entire or concealing it by the reflection of their margins.

Only two species of this genus are inserted in the Hortus Kewensis, the *volubilis,* figured at No. 449, of this work under the mistaken name of DILLENIA *speciosa,* which is a lofty tree, native of the East Indies. In DE CANDOLLE'S excellent natural system of the vegetable kingdom nineteen species are recorded; all of them natives of New Holland, and most of them first discovered by that eminent Botanist and traveller ROBERT BROWN, Esq. the worthy possessor of the Banksian library, herbarium and museum, to whose learning, talents for observation and experimental knowledge of the vegetable creation, the eyes of botanical Europe are directed.

Communicated by Messrs. LODDIGES and SONS. Flowers in the spring and most part of the summer. Propagated easily by cuttings and sometimes produces ripe seeds. Loves a soil composed of peat and loam.

N.2339.



J. Curtis Del. Pub. by S. Curtis Walworth Aug. 1. 1822. Weddell Sc.

BURCHELLIA BUBALINA. CAPE BURCHELLIA.

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Class and Order.

PENTANDRIA MONOGYNIA.

Generic Character.

Capitulum involucratum. *Cor.* clavato-infundibuliformis: limbo 5-fido abbreviato fauceque imberbi; æstivatione mutuo imbricatâ contortâ. *Stamina* supra medium tubi inserta; *antheris* subsessilibus, inclusis. *Stigma* clavatum. *Bacca* calyce alte 5-fido coronata, bilocularis polysperma. *Brown in Bot. Reg.*

Specific Name and Synonyms.

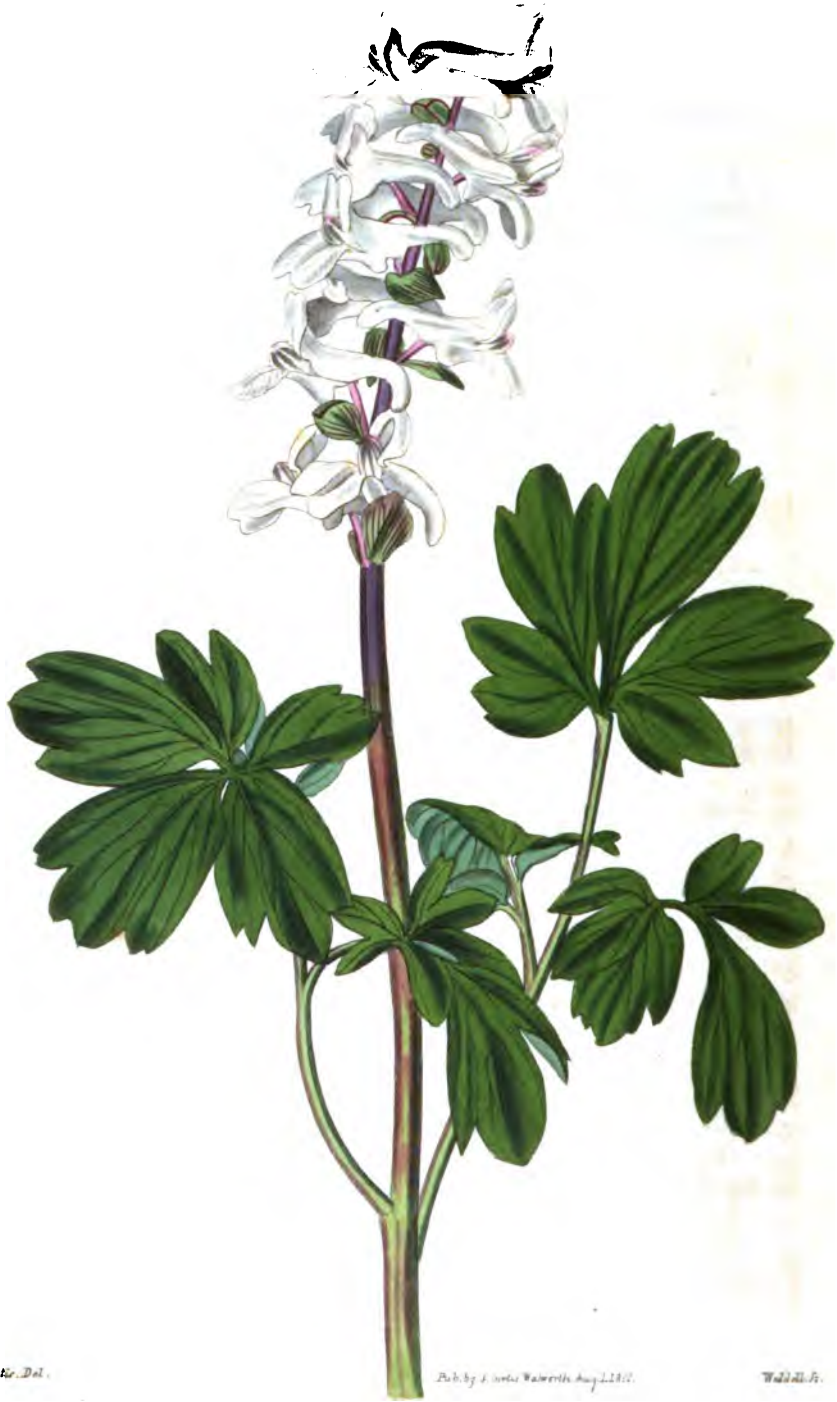
BURCHELLIA *bubalina.*
Burchellia capensis. *Brown in Bot. Reg.* 466.
LONICERA *bubalina;* capitulis terminalibus pedunculatis, foliis oblongis integerrimis glabris. *Lin. Suppl. p.* 146.
CEPHÆLIS bubalina. *Persoon Syn. p.* 202. *n.* 12.
BUFFEL-HORN. *Colonis batavis.*

In the Supplementum Plantarum of the younger LINNÆUS this plant was referred to the genus LONICERA; but as it belongs to the natural order of *Rubiaceæ* it will by no means associate with that genus. PERSOON joined it with Swartz's CEPHÆLIS the TAPOCOMEA of AUBLET and JUSSIEU; but Mr. BROWN, not finding it to accord with any established genus, has considered it as distinct from any, and given it the name of BURCHELLIA in honour of Mr. BURCHELL, a very enterprising traveller in Southern Africa, who has favoured the public with an interesting account of his travels in that country. And, certainly, persons who, in spite of deprivations and difficulties, spend a large portion of their valuable time in such hazardous undertakings, for the promotion of science, merit this only reward of the botanist; but we can by no means approve of altering the specific name, which, when once established, should remain inviolate, except for very particular reasons; we have therefore thought it right to restore the name of *bubalina*.

BURCHELLIA *bubalina* is a native of the Cape of Good Hope, where it is called Buffelhorn or Buffaloe-Horn, a name given it by the colonists from the extreme hardness of its wood.

Flowers in the spring or summer. Requires to be protected from frost and we believe has seldom blossomed in this country without the assistance of the heat of the stove. Communicated by Messrs. LODDIGES and SONS.

N.2340.



J. Curtis. Del.

Pub. by S. Curtis Walworth Aug. 1. 1822.

Weddell Sc.

(2340)

FUMARIA CAVA *var.* ALBIFLORA. WHITE HOLLOW-ROOTED FUMITORY.

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Class and Order.

DIADELPHIA HEXANDRIA.

Generic Character.

Cal. diphyllus. *Cor.* ringens. *Filamenta* 2, membranacea, singula Antheris 3.

Specific Character and Synonyms.

FUMARIA *cava;* caule simplici, racemo terminali, bracteis integerrimis, foliis biternatis apicibus tridentatis, radice tuberosa cava.

FUMARIA *bulbosa;* caule simplici, racemo terminali, bracteis oblongis pedunculo longioribus, foliis biternatis oblongis acutiusculis, radice tuberosa cava. *Willd. Sp. Pl.* 3. *p.* 860. *Hort. Kew. ed. alt.* 4. *p.* 239.

FUMARIA *cava;* caule simplici, bracteis longitudine florum integris, radice cava. *Curtis in Bot. Mag. n.* 232.

FUMARIA *cava;* caule simplici, foliolis obtusiusculis, calcari recurvo, bracteis lanceolatis acutis, radice cava. *Retz. prodr. Fl. Scand. ed.* 2. *n.* 860. *Hoffm. Germ.* 248. *Ehrh. beitr.* 6. *p.* 145.

CORYDALIS bulbosa. *Persoon Syn.* 2. *p.* 269, *n.* 12.

CORYDALIS *tuberosa;* caule simplici exsquamato, foliis 2 biternatim sectis, segmentis cuneatis inciso-multifidis, bracteis ovatis integris, radice cava. *De Cand. Syst. Veg. Nat.* 2. *p.* 117.

CORYDALIS *cava;* radice tuberosa cava, caule simplicissimo diphyllo, foliis biternatis: intermedio producto, bracteis oblongis acutis. *Wahlenb. Fl. carp. p.* 211.

FUMARIA *major;* radice bulbosa, caule simplici, bracteis integerrimis ovato-lanceolatis floribus brevioribus. *Roth. Germ.* I. 30. II. 151.

FUMARIA bulbosa major. *Flor. Dan. t.* 605. *Kniph. Cent.* 1.

FUMARIA bulbosa radice cava major. *Bauh. Pin.* 143.

Fumaria radice cava major flore purpureo et albo. *Moris. Hist.* § 3. *p.* 261. *t.* 12. *f.* 6.
Fumaria altera. *Cam. Epit.* 891. *f.* 1.
Pistolochia *Fuchs. Hist.* 91.
Radix cava. *Dod. pempt.* 327. *Lob. icon.* 759. *Park. Parad.* 275.
Aristolochia flore albo. *Hort. Eystt. ord. vern.* 1. *t.* 2. *f.* 4.
Pseudo-Fumaria. *Riv. tetrap. irreg. ic.* 73.

Mr. Curtis in an early part of this work separated the two varieties of Linnæus's Fumaria *bulbosa* into distinct species, and applied to them the very appropriate names of *cava* and *solida*, which Linnæus himself had affixed to his varieties. But Willdenow inconsiderately retained the name of *bulbosa* for the *cava*, and applied that of *Halleri* to *solida*. And as this author has been generally followed in the Hortus Kewensis, our present plant occurs therein under the name of *bulbosa;* though that of *solida* is adopted for the other species. De Candolle, apparently to avoid the anomaly of a hollow bulb, calls it *tuberosa,* thus unnecessarily adding one more to the number of appellations.

We believe that the character of entire as opposed to palmate bractes will always distinguish this species from *solida*.

De Candolle, in the second volume of his Systema, has erected the genus Fumaria, as established by Linnæus, to the dignity of a natural order, under the name of *Fumariaceæ*. This order is divided into six distinct genera, distinguished chiefly by the number of petals and seeds; and Fumaria is limited to the monopetalous and one-seeded species. To this we have nothing to object; but for the present we prefer adhering to the old name to the adopting that of Corydalis to which genus our plant belongs according to this new arrangement. Fumaria *cava* has not been found indigenous in Britain, though it occurs in shady and moist situations in almost the whole of Europe from the north of Italy to Sweden, and even in Siberia and Kamtchatka. It was much more common in our gardens formerly than at present. Flowers from February to the latter end of April. Communicated by Messrs. Whitley, Brame, and Milne. Propagated by cuttings of the root, of which Parkinson says that "being broken every part will grow." In his time the white variety seems to have been most common, but is now of very rare occurrence.

N2341.

Weddell. sc

POTERIUM CAUDATUM. SMOOTH SHRUBBY BURNET.

* * * * * * * * * * * * * * * * * * *

Class and Order.

MONOECIA POLYANDRIA.

Generic Character.

MASC. *Cal.* 4-phyllus. *Cor.* 4-partita. *Stam.* 30—50. FEM. *Cal.* 4-phyllus. *Cor.* 4-partita. *Pist.* 2. Bacca è tubo corollæ indurato.

Specific Character and Synonyms.

POTERIUM *caudatum* [Dioicum] inerme, frutescens, ramis teretibus villosis, spicis elongatis laxis. *Hort. Kew. ed.* I. 3. *p.* 354. *ed. alt.* 5. *p.* 286. *Willd. Sp. Pl.* 4. *p.* 423. *Poirét Encycl. Bot. Suppl.* 4. *p.* 415. *Martyn Mill. Dict. n.* 4.

Native of the Canary Islands, from whence it was introduced into this country in the year 1779 by Mr. FRANCIS MASSON, but seems to be very little known upon the continent, as we judge by its not occurring in any of the systematic writers, except as copied from the first edition of AITON'S Hortus Kewensis.

In some respects it differs from the other species of the genus, but has a nearer affinity with *spinosum* than the rest.

It seems to be constantly diœcious, the male and female flowers growing upon distinct shrubs. We have twice in different years received specimens from our friend Mr. WALKER of Arno's-grove both of them female, and from Messrs. WHITLEY, BRAME and MILNE, a specimen from a male plant. In the female each flower is supported by a proportionally large, concave, ovate-acuminate *bracte*, and and two interior smaller ones, (*Calyx* of LINNÆUS) villous, scariose, deciduous, and applied close to the globular, *germen*. *Calyx* (*Corolla* of LINNÆUS) four-cleft, green edged

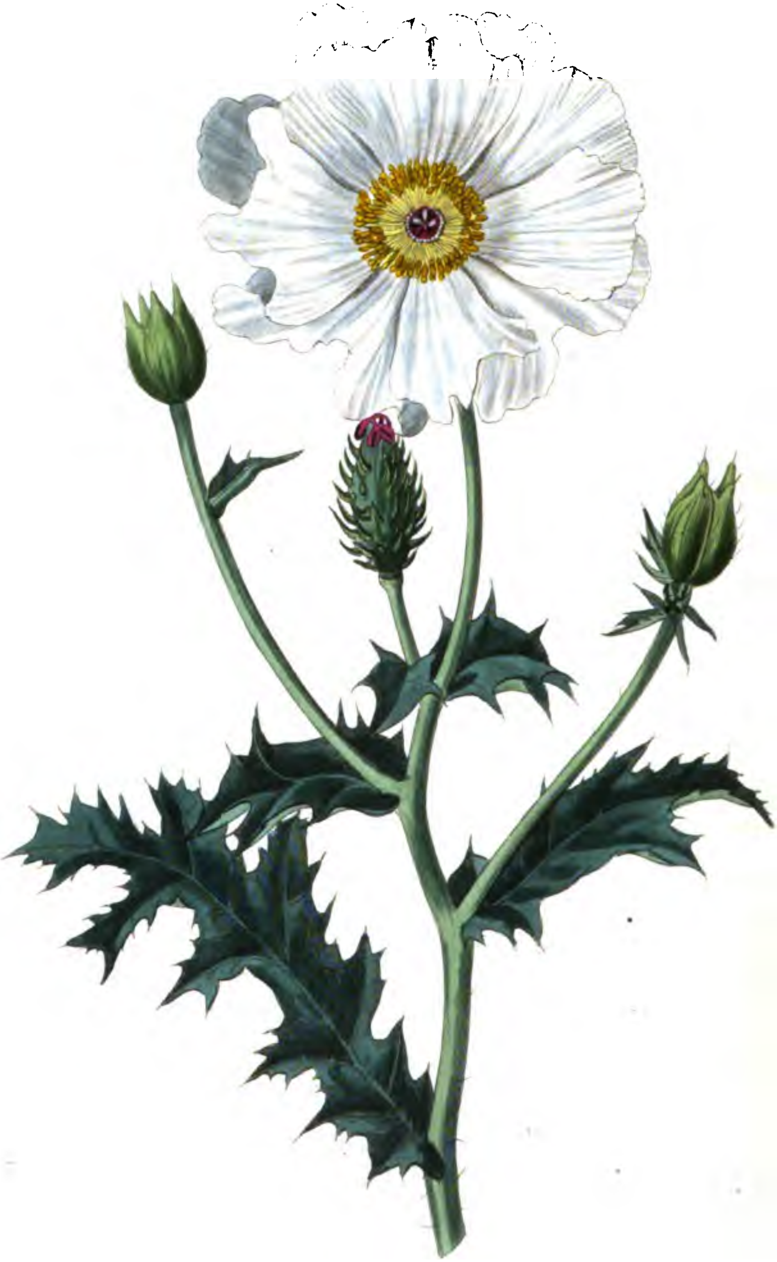
with white, smooth, persistent and reflected on the germen. *Styles* 2, filiform, with pencilled, purple *stigmas*. But in the plant from which our drawing was made the flowers had generally three styles and six calycine leaflets, which was not the case in the other specimen and is not its natural state.

In the male, the bractes and calycine leaflets are the same as in the female, but there being no germen interposed the inner bractes are applied close to the calyx. *Anthers* numerous, large hemispherical, supported on slender filaments.

If the inner bractes are to be called calyx, then this part is below the germen, and the corolla above, which is a very unusual anomaly.

We believe no figure has ever before been published of this plant. Requires the protection of the Greenhouse. Flowers in March and April.

N.2342.



J. Curtis Del

Pub by S. Curtis, Walworth, [illegible]

Weddell Sc.

(2342)

ARGEMONE ALBIFLORA. WHITE-FLOWERED ARGEMONE.

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Class and Order.

POLYANDRIA MONOGYNIA.

Generic Character.

Cor. 6-petala. *Cal.* 3-phyllus. *Caps.* semivalvis.

Specific Character and Synonyms.

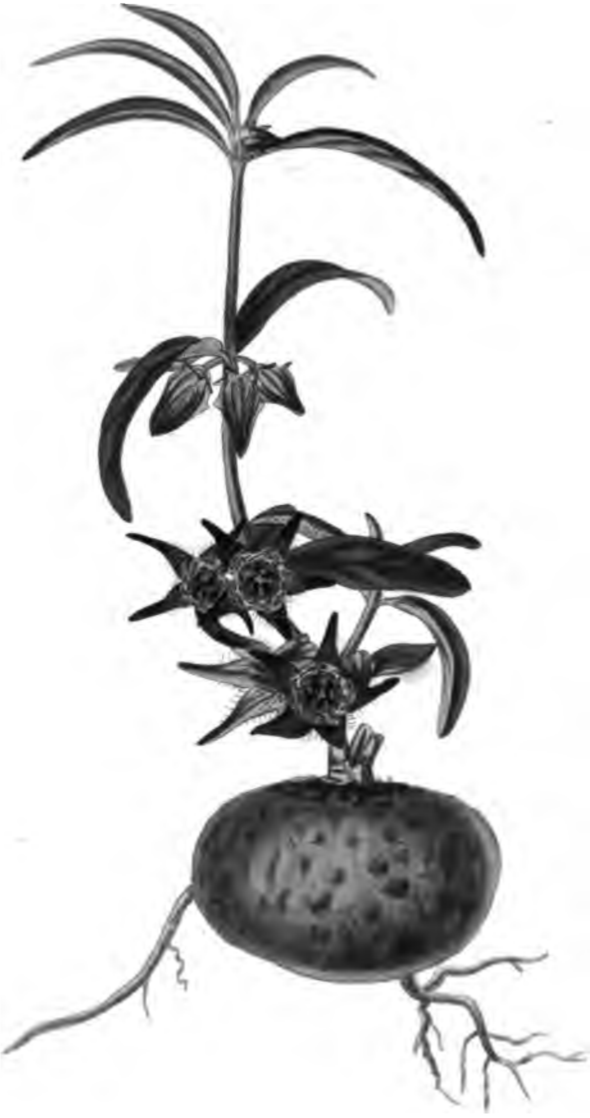
ARGEMONE *albiflora;* capsulis quinque-valvibus, pedunculatis, foliis subspinosis. *Hornem. Hort. Hafn. p.* 489.
ARGEMONE alba. *Lestib. Bot. Belg.* 4. *p.* 131.
ARGEMONE *mexicana,* β. albiflora. *De Cand. Syst. veg.* 2. *p.* 86.
ARGEMONE *mexicana,* α. floribus albis. *Hist. Nat. medic. et. econom. des Pavots et des Argémones.* β. *Lam. Encycl.* 1. *p.* 247. *De Freylin Catal. du. Jard. de Buttigliera.* 1810. *Syn. Plant. Mus. Florent.* 1806. *Cat. Plant. Hort. Patavini.* 1812.

ARGEMONE *albiflora,* has generally been considered to be only a variety of *mexicana,* but seems to be a distinct species, and is recorded as such by Professor HORNEMAN in his Catalogue of the Copenhagen garden. NUTTALL mentions by report only " not merely a variety, but distinct species with white flowers" as occurring in Georgia. In our plant, for which, as well as for the principal part of the above synonymy, we are indebted to PHILIP BARKER WEBB, Esq. of Milford House, near Godalmin, Surrey, who raised it from seeds sent him from Italy by Mr. ALBERT PAROLINI of Bassano.

The leaves are narrower than in *mexicana,* much less sharply spined, with the veins only faintly marked with white; but the principal difference is that the flowers of the latter are, for the most part, nearly sessile, being embosomed in an involucrum of leaves, whereas those of A. *albiflora* are on nearly naked peduncles.

Although native of a tropical climate, like ARGEMONE *mexicana,* it may be considered as a hardy annual as it readily ripens its seeds in the open air.

N. 2343.



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Pub. by S. Curtis Walworth Sep. 1. 1822

Weddell sc.

BRACHYSTELMA TUBEROSA. TUBEROUS-ROOTED BRACHYSTELMA.

****

Class and Order.

PENTANDRIA DIGYNIA.

Generic Character.

Asclepiadea. *Corolla* campanulata, sinubus angulatis. *Columna* inclusa. *Corona* monophylla, 5-fida: lobis antheris oppositis, dorso simplicibus. *Antheræ* absque membrana apiculari. *Massæ pollinis* erectæ, basi insertæ. BROWN, Mscr.

Specific Name and Synonym.

BRACHYSTELMA tuberosa. *Brown Mscr.*
STAPELIA tuberosa. *Meerb. ic. t.* 54. *f.* 1. monente D. AITON.

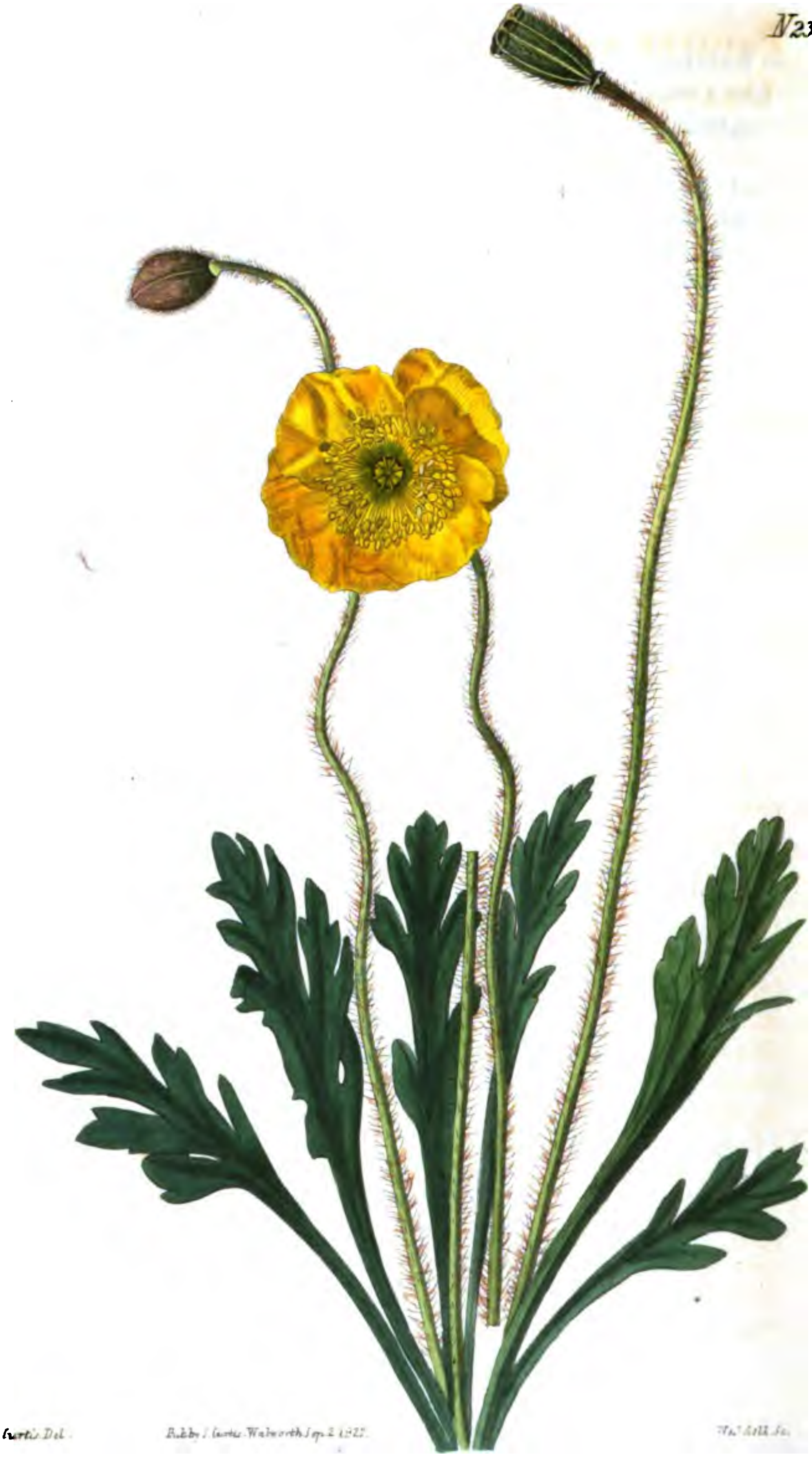
DESCR. *Root* a round tuber. *Stem* short, shrubby, branched: *branches* rounded, villous. *Leaves* opposite, membraneous, linear-lanceolate, concave, margins and keel ciliate. *Flowers* in half whorls, about the size of STAPELIA *reclinata n.* 1397, three or four in each whorl, on short, cernuous peduncles. *Calyx* 5-cleft, acute, shorter than the tube of the corolla, and with the peduncle clothed with short glandular hairs. *Corolla* on the outside green, dotted with red; on the inside black-purple, streaked with yellow in the centre: *tube* bell shaped: *limb* 5-cleft, margins of the *laciniæ* revolute, ciliate at the base. *Corona* 5-cleft: segments triangular, conniving at the points. Like those of the STAPELIÆ, the flowers have a very offensive odour, in this instance most resembling human fæces.

Mr. BROWN in his valuable treatise on the natural orders of *Asclepiadeæ* and *Apocineæ*, published in the first volume of the transactions of the Wernerian Society, has divided the genus STAPELIA, but our present plant, will not unite with any of the genera there established; we are therefore highly indebted to the friendship of this learned Botanist, for enabling us to establish the genus of this very rare plant.

Meerburg's figure, above quoted, which was pointed out to Mr. Brown by Mr. Aiton, represents the flower much larger than in our specimen, with the segments elongated to a very narrow point.

A native of the Cape of Good Hope, requiring to be protected from frost, and more particularly from damps. Communicated in blossom in June last, by Mr. Joseph Knight of the Exotic Nursery in the King's Road.

N 2344.



J Curtis Del. Pub by J Curtis Walworth Sep 2 1822. Weddell Sc.

PAPAVER NUDICAULE, δ. RUBRO-AURANTIACUM. ORANGE-COLOURED, NAKED-STALKED POPPY.

****

Class and Order.

POLYANDRIA MONOGYNIA.

Generic Character.

Cor. 4-petala. *Cal.* diphyllus. *Caps.* 1-locularis, sub stigmate persistente poris dehiscens.

Specific Character and Synonyms.

PAPAVER *nudicaule;* capsulis erectis hispidis, scapo unifloro hispido, foliis simplicibus pinnato-sinuatis, calycibus hirsutis. *Vide supra No.* 1633.

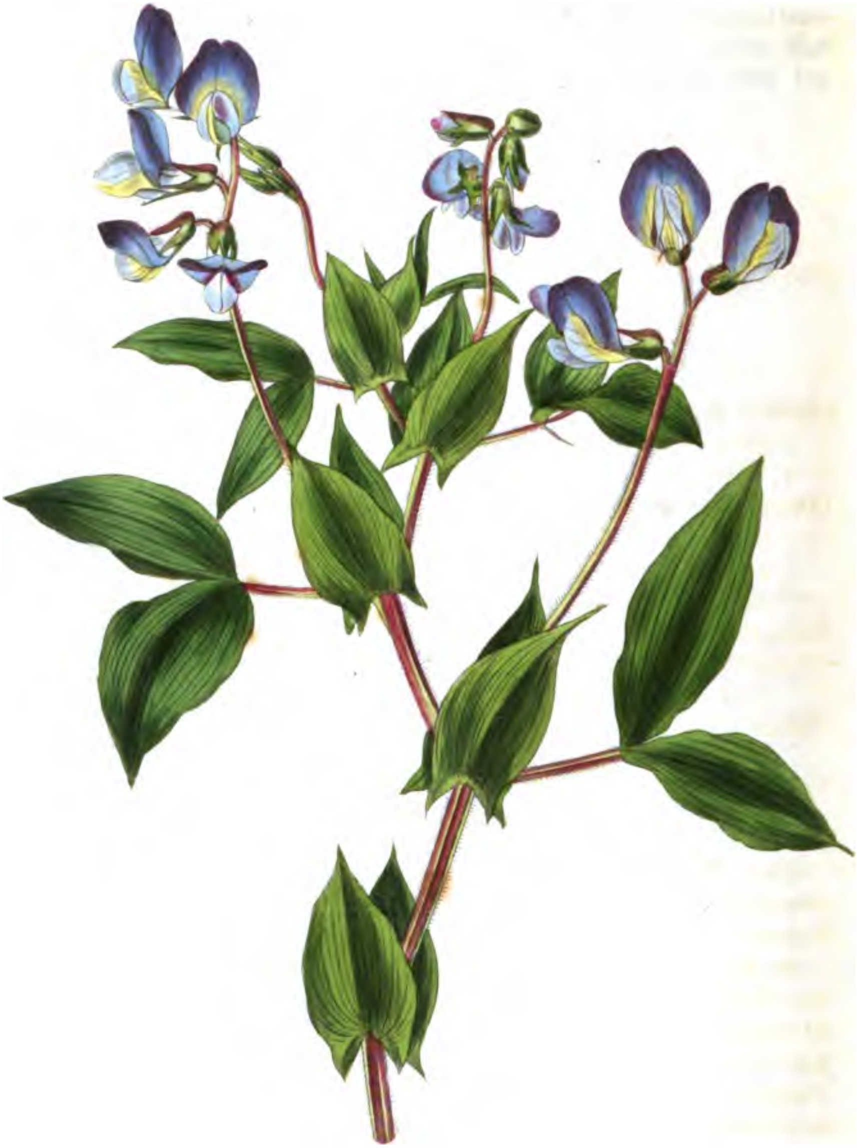
(δ.) *rubro-aurantiacum.* FISCH. *De Cand. Syst. Veg. nat.* 2. *p.* 70.

DE CANDOLLE enumerates four varieties of PAPAVER *nudicaule,* of which this is the last, and he observes that it may probably be a distinct species. Perhaps farther observation may prove some of the others to be specifically different. Our Plant, while it differs very materially from the figure in Flora Danica referred to by this author as a good representation of his variety γ. *radicatum,* which has very hairy leaves, and if the drawing is correct a quite different stigma, has not however the characters mentioned from Dr. FISCHER of adpressed hairs on the scape, and the lobules of the leaves terminated with a bristle. From the yellow-flowered variety figured at No. 1633, it differs in size, and in the colour both of the flowers and hairs of the scape, and in the form of the leaves, which are also destitute of all hairiness. Perhaps the number of the rays of the stigma, may afford a good specific distinction; which in our plant are eight, in the one figured in the Flora Danica, if the artist be correct, only four; but we are not certain of the constancy of this character.

The variety mentioned at No. 1633, to have been received from Mr. Loddiges was probably the same as our plant, but upon referring to the specimen, we find that the leaves in that are thinly scattered over with hairs, and the lobes terminated with a bristle; so that the total want of hairiness in the leaves appears to have been the effect of cultivation.

Native of Dahuria. A hardy biennial. Flowers in June and July. Communicated by Mr. Anderson from the Chelsea garden, where it was raised from seeds sent by Dr. Fischer.

N2345.



Del. Pub. by S. Curtis Walworth. Sep. 2. 1822. Weddell sc.

(2345)

OROBUS HIRSUTUS. HAIRY BITTER-VETCH.

Class and Order.

DIADELPHIA DECANDRIA.

Generic Character.

Stylus linearis. *Cal.* basi obtusus: laciniis superioribus profundioribus, brevioribus.

Specific Character and Synonyms.

OROBUS *hirsutus;* foliis conjugatis petiolatis, stipulis integris. *Sp. Pl.* 1027. *ed. Willd.* 3. *p.* 1072. *M. B. Fl. Taur. Caucas.* 2. *p.* 152. *et.* 3. *p.* 461.

OROBUS *laxiflorus;* villosus, foliis conjugatis ovatis acutis, stipulis maximis sagittatis, floribus laxe racemosis, laciniis calycinis subulato-setaceis. *Desfont. in Annáles du Mus.* 12. *p.* 57. *t.* 8.

OROBUS creticus latifolius incanus. *Tournef. Cor.* 26.

OROBUS latifolius repens, flore cæruleo, foliis et siliquis hirsutis. *Boerh. Ind. alt.* 2. *p.* 46. *n.* 7.

OROBUS sylvaticus, foliis circa caulem auriculatis. *Buxb. Cent.* 3. *p.* 22. *t.* 41.

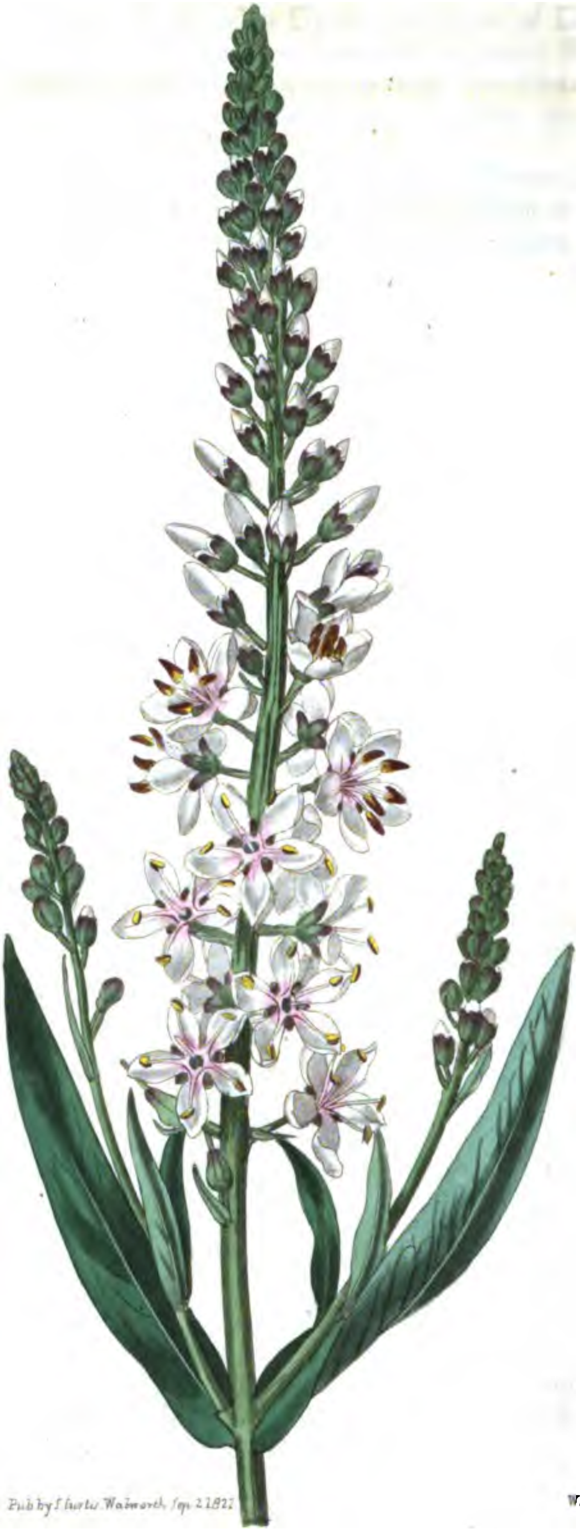
The OROBUS *hirsutus* is a very rare plant, and is not recorded either in the Hortus Kewensis or any of the catalogues of plants growing in our gardens.

It was one of the plants discovered by TOURNEFORT in the Isle of Candia, and from his specimens the figure of DESFONTAINES above quoted was taken. It is nearest of kin to OROBUS *lathyroides* (No. 2098) from which it differs chiefly in having quite entire as well as pubescent stipules and leaves; and in the trichotomous division of the upper part of the stem.

The faultiness of the description added by WILLDENOW, from a dried specimen, occasioned DESFONTAINES to doubt this plant being the same as OROBUS *hirsutus* of LINNÆUS; the raceme which WILLDENOW describes as many flowered, seldom or never consisting of more than five flowers, and the corolla exceeding the calyx by one-half, instead of their being equal.

A hardy perennial. Native of Candia, Thrace, Iberia, Tauria, and oriental Caucasus. Flowers in May and June. Communicated by Mr. ANDERSON, from the Chelsea garden.

N.2348



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(2346)

LYSIMACHIA EPHEMERUM. WILLOW-LEAVED LOOSE-STRIFE.

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Class and Order.

PENTANDRIA MONOGYNIA.

Generic Character.

Cor. rotata. *Caps.* globosa, mucronata, 10-valvis.

Specific Character and Synonyms.

LYSIMACHIA *Ephemerum;* racemis terminalibus, petalis obovatis patulis, foliis lineari-lanceolatis sessilibus. *Hort. Kew. ed.* 1. *v.* 1. *p.* 198.—*ed. alt.* 1. *p.* 314. *Willd. Sp. Pl.* 1. *p.* 816. *Roem. et Sch. Syst. Veg.* 4. *p.* 121. *Mart. Mill. Dict. n.* 2.

LYSIMACHIA *Ephemerum;* racemis simplicibus terminalibus, petalis obtusis, staminibus corolla brevioribus. *Sp. Pl.* 209. *Murray Comm. Goett.* 1782. *p.* 9. *t.* 2. optima.

LYSIMACHIA salicifolia. *Mill. Dict. n.* 6.

LYSIMACHIA Otani. *D'Asso Arragon.* 22. *n.* 168. *t.* 2. *f.* 1.

LYSIMACHIA Ephemerum. *D. C. fl. franç. sep. p.* 381.

EPHEMERUM Matthioli *Dod. Pempt.* 203. *fig. bona Lob. ic.* 354. *Bauh. pin.* 244. *Bauh. Hist.* 2. *p.* 905.

EPHEMERUM spurium Lobelii. *Obs.* 191. *Rob. ic.*

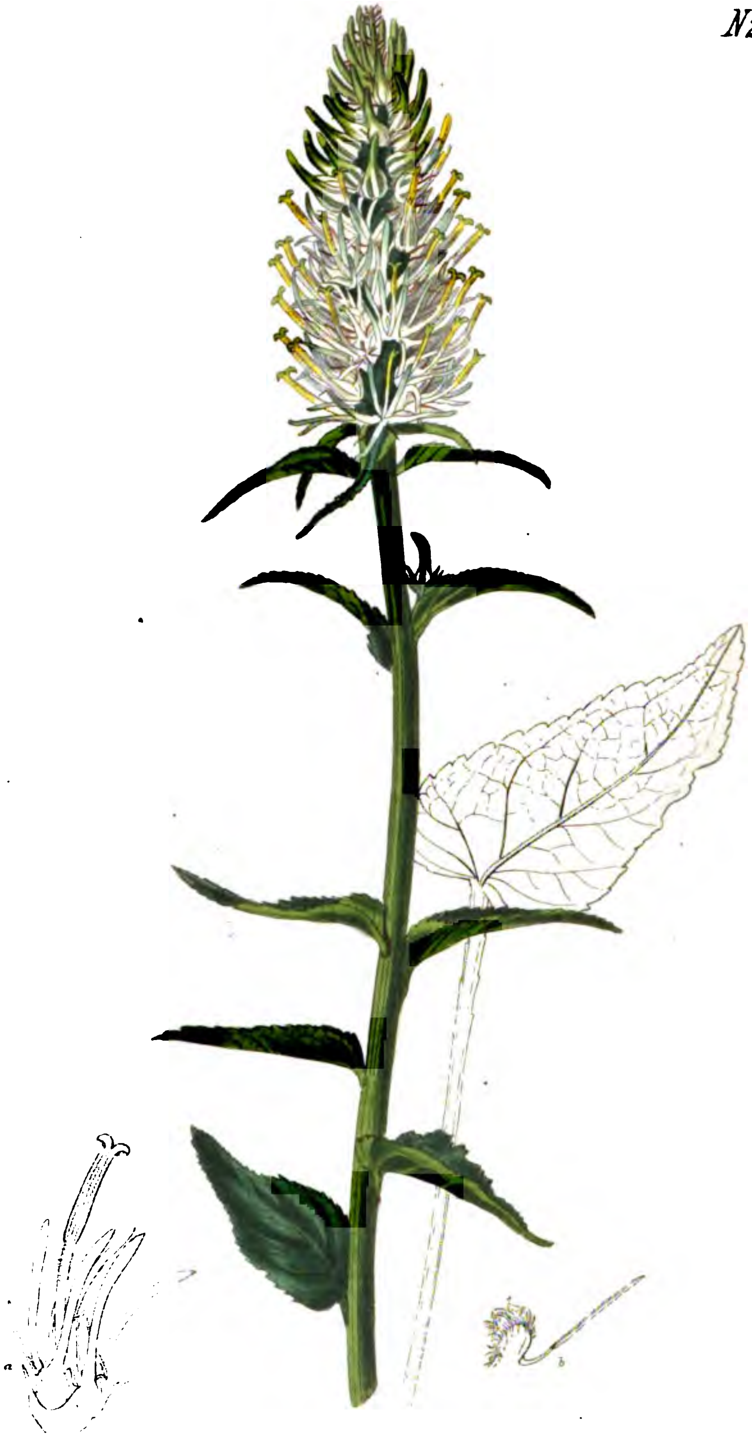
Synonymon *Till. Pis.* 106. *t.* 40. *f.* 2., ut pote vix ad hanc speciem pertinens, ex consulto omittitur.

LYSIMACHIA *Ephemerum, atropurpurea,* and *dubia* before the publication of MURRAY'S figures in the Gœttingen Commentaries were generally confounded together. Our present species is a handsome growing plant with long terminal spikes of white flowers tinged with purple, and very worthy of a place in the flower-garden. The dotting on the underside of the leaves, mentioned in the descriptions of this plant, is so minute as not to be visible with the naked eye on the upper leaves, but is very evident on the older ones.

A hardy perennial. Native of Spain, the south of France, and, according to THUNBERG, of Japan. Flowers from July to September.

We received fine specimens of this plant from the Botanical garden at Bury St. Edmunds, in the present year, but our drawing was taken by the late Mr. SYDENHAM EDWARDS at the Brompton garden, several years ago.

N2347.



Del Pub by S Curtis Walworth Sep 2. 1822. Wed [illegible]

PHYTEUMA SPICATUM. SPIKED RAMPION.

✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱

Class and Order.

PENTANDRIA MONOGYNIA.

Generic Character.

Cor. rotata, 5-partita: laciniis linearibus. *Stigma* 2- s. 3-fidum. *Caps.* 2- s. 3-locularis, infera.

Specific Character and Synonyms.

PHYTEUMA *spicatum;* spica oblonga elongata, stylis pilosiusculis, (bi-) trifidis, foliis radicalibus cordatis duplicato-dentatis. *Willd. Sp. Pl.* 1. *p.* 923. *Roem. et Sch. Syst. Veg.* 5. *p.* 82. *Hort. Kew. ed. alt.* 1. *p.* 355.
PHYTEUMA spicatum. *De Cand. Flor. Franç. n.* 2867.
RAPUNCULUS spicatus. *Mill. Dict. Scopol. Carniol. ed.* 2. *n.* 238. *Bauh. Pin.* 92. *Bauh. Prodr. t.* 32.
RAPUNCULUS foliis radicalibus cordatis, tubis bicornibus revolutis. *Hall. Hist. n.* 684.
RAPUNTIUM majus. *Ger. emac.* 453. *f.* 1.
RAPUNCULUM alopecuron. *Dod. pempt.* 165.
RAPUNTIUM majus alopecuri comoso flore. *Lob. ic.* 329. *f.* 1.
RAPUNCULUS corniculatus spicatus, s. alopecuroides. *Moris. Hist.* 2. *p.* 463. *s.* 5. *t.* 5. *f.* 46.
RAPUNCULUS corniculatus spica longiore. *Riv. Monop. irreg.* 108.
(α.) floribus ochroleucis.
(β.) floribus cæruleis.

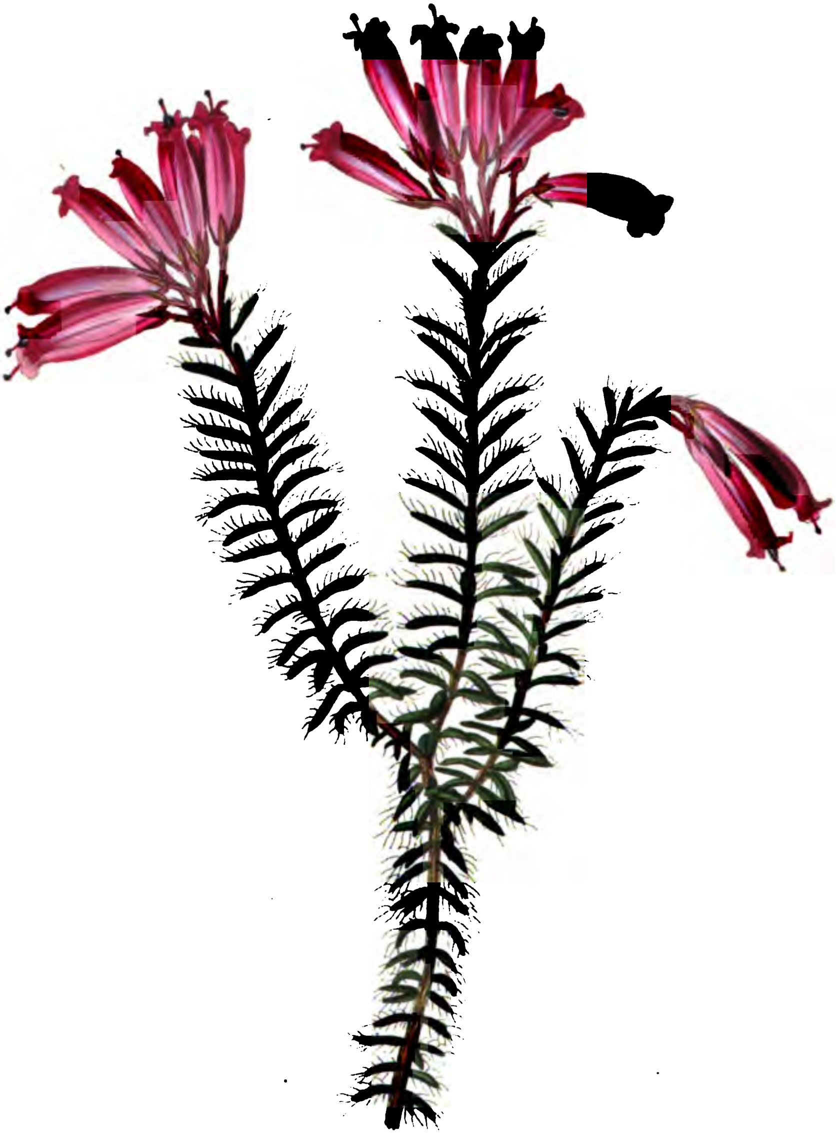
Some authors have described the flowers of PHYTEUMA *spicatum* as being of a blue colour, others of a yellowish white. It is not improbable that both colours may exist in the same species, but we are inclined to think that two different species have been confounded together; and perhaps the trifid or bifid division of the stigma may

distinguish them. The late Dr. ROEMER, in the Systema Vegetabilium, says the flowers are usually yellowish white, very rarely blue, and questions whether the latter may not be a distinct species, being of much humbler growth. This author enumerates several varieties, differing chiefly in the form of the leaves and colour of the flowers.

A hardy perennial. Native of the middle parts of Europe. Flowers in June and July. Communicated by Mr. JENKINS from his Botanical garden in the New-Road.

The outline figures represent, a radical leaf; *a*. a flower magnified; *b*. a stamen magnified.

N. 2348.



J. Curtis Del. Pub. by S. Curtis. Walworth. Sep. 2 1822. Weddell Sc.

(2348)

ERICA MUTABILIS. MUTABLE HEATH.

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Class and Order.

OCTANDRIA MONOGYNIA.

Generic Character.

Cal. 4-phyllus. *Cor.* persistens: limbo 4-fido. *Antheræ* ante anthesin per foramina duo lateralia connexæ. *Caps.* 4—8-locularis, 4—8-valvis.

Specific Character and Synonyms.

§. II. Longifloræ. A. Antheræ aristatæ.

ERICA *mutabilis;* foliis ternis quaternisve, floribus terminalibus numerosis. *Hort. Kew. ed. alt.* 2. *p.* 369.

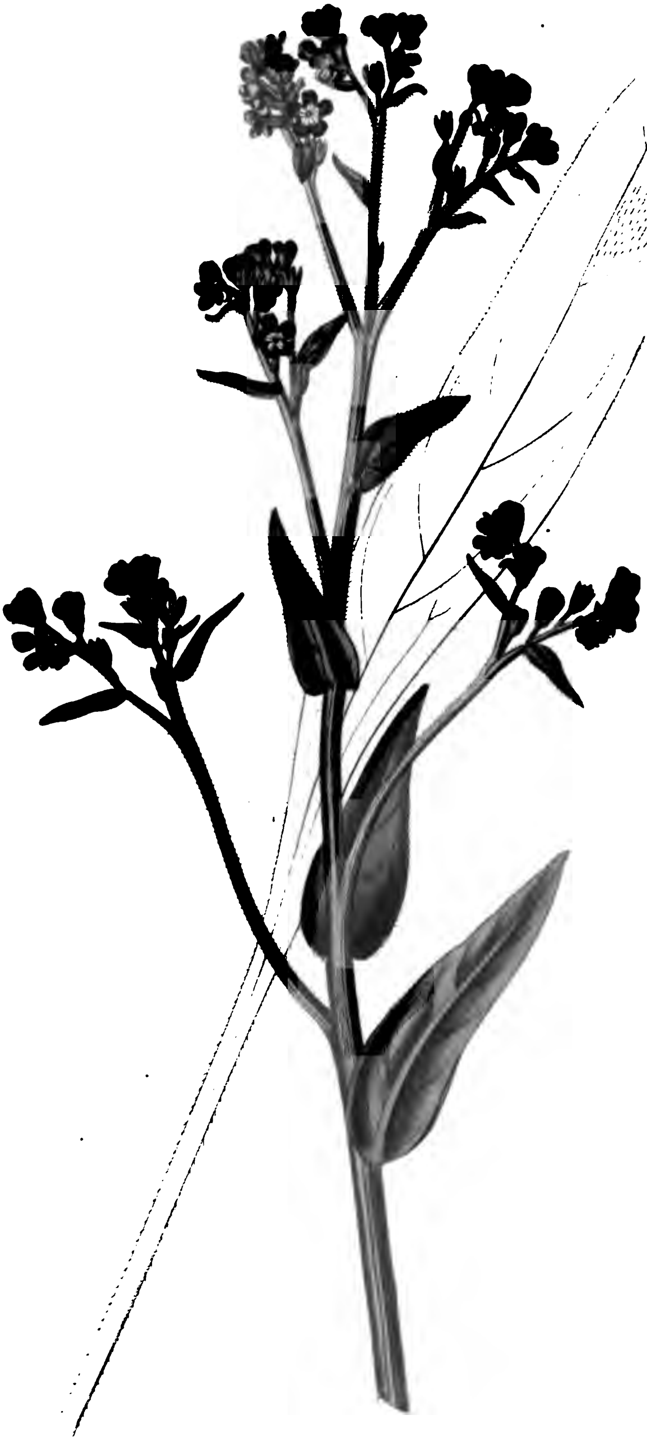
ERICA mutabilis. *Andrews's Heaths, Vol.* 3. *Lodd. Cab.* 46.

A low crooked *shrub* with few branches. *Leaves* ternate, sometimes quaternate, patent: margins reflected, ciliated with long, black, straggling hairs. *Flowers* grow many together on the extremities of the branches, on long, coloured *peduncles,* at first cernuous, afterwards erect. *Bractes* 2, distant from the calyx. *Calyx* small, 4-cleft: segments erect, minutely ciliate and terminated with an awn. *Tube* of corolla ¾ of an inch long, slightly curved, angular, somewhat enlarged upwards, but contracted at the mouth: laciniæ of the limb obtuse, recurved at the point, with the margins reflected at the base. *Anthers* awned, oblong, black-purple, protruded very little beyond the tube. *Germen* top-shaped, grooved, hairy at the top. *Style* longer than stamens: *stigma* capitate.

Erica *mutabilis* is a beautiful Heath, producing a great number of flowers, at first pale, afterwards of a bright crimson colour. Mr. LODDIGES remarks that it is apt to exhaust itself by overflowering, and recommends some of the buds to be pulled off before they expand to lengthen its life. He observes too that it is not easily propagated except by seeds.

Flowers in September and October. Requires protection from frost and the same treatment as other Cape Heaths. Communicated by Messrs. Loddiges and Sons.

N 2349



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ANCHUSA BARRELIERI. BARRELIER'S BUGLOSS.

****

Class and Order.

PENTANDRIA MONOGYNIA.

Generic Character.

Cor. infundibuliformis, fauce clausa fornicibus. *Sem.* basi insculpta.

Specific Character and Synonyms.

ANCHUSA *Barrelieri;* foliis radicalibus elliptico-lanceolatis; caulinis semiamplexicaulibus, racemis conjugatis, calycibus quinquepartitis tubo corollæ æqualibus.

ANCHUSA *Barrelieri;* foliis oblongis subintegris utrinque attenuatis cauleque simplici hispidis, pedunculis trifidis, calycibus quinquepartitis. *Roem. et Sch. Syst. Veg.* 4. *p.* 97. *ex. De Cand. Fl. Franç. n.* 2731.

ANCHUSA *Barrelieri;* foliis ovato-lanceolatis, caule erecto, axillis foliorum florigeris, racemis paniculatis unilateralibus, calycibus quinquepartitis, corollæ tubo brevissimo. *Tenore Fl. Neapol. p.* 46.

ANCHUSA *Barrelieri;* caulibus erectis subsimplicibus, foliis oblongo-lanceolatis denticulatis hispidis, racemis conjugatis paniculatis bracteatis, calycibus obtusissimis tubo corollæ æqualis longioribus. *Lehm. Asperif. p.* 227. *n.* 170.

ANCHUSA *Barrelieri;* foliis oblongo-lanceolatis acutis, caule paniculato racemis conjugatis nudis, calycibus quinque-partitis: laciniis linearibus obtusissimis, bracteis linearibus. *Baumg. Fl. Transylv.* 1. *p.* 122. ex Lehman.

BUGLOSSUM *Barrelieri;* foliis ovato-lanceolatis, caule erecto, axillis foliorum florigeris, racemis florum unilateralibus. *Allioni Ped. n.* 164.

MYOSOTIS *obtusa;* caule subsimplici foliisque lanceolatis acutis subrepandis hispidis, spicis conjugatis subcorymbosis,

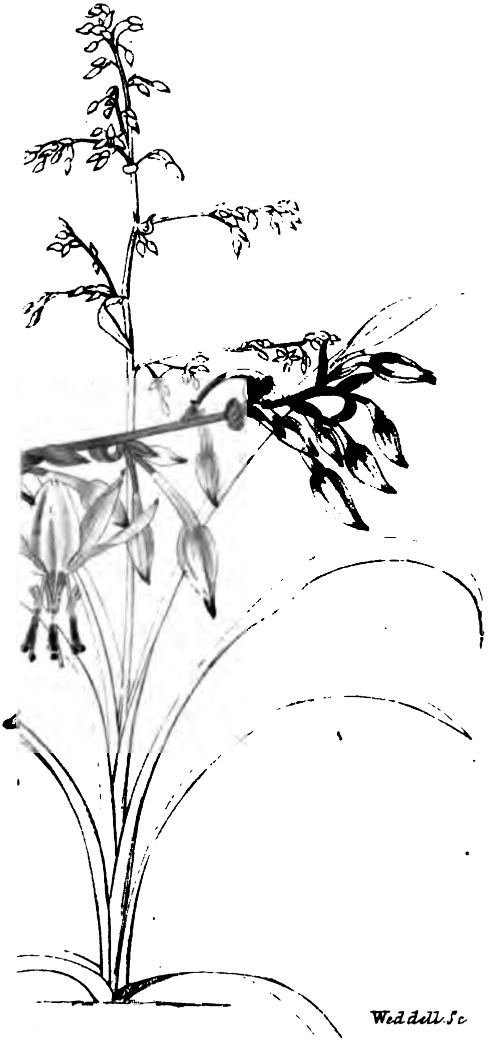
rymbosis, calycibus obtusissimis. *Waldst. et Kit. pl. rar. Hung.* 1. *p.* 103. *t.* 100. *Willd. Enum.* 1. *p.* 176. *Roem. et Sch. Sp. Pl.* 4. *p.* 107.

Buglossum sylvestre minus, flore azureo, radice perenni, italicum. *Barr. ic.* 333.

It seems now pretty generally agreed that the **Myosotis** *obtusa* of **Waldstein** and **Kitaibel** and **Anchusa** *Barrelieri* are the same. In our plant the leaves were more entire at the margin than as represented in either of the figures above quoted, but we see no reason to doubt that all belong to the same species. We do not however pretend at present to ascertain whether this plant ought to be arranged under **Anchusa** or **Myosotis**, being entirely led in regard to it by the authority of **Lehman**.

A hardy perennial. Native of Italy and the South of France. Flowers in May. Communicated by Mr. **Anderson** from the Chelsea garden.

N.º 2350.



ARTHROPODIUM CIRRATUM. BROAD-LEAVED ARTHROPODIUM.

****

Class and Order.

HEXANDRIA MONOGYNIA.

Generic Character.

Cor. 6-petala, patens, petalis deciduis: interioribus margine undulatis v. fimbriatis. *Filam.* barbata. *Antheræ* basi emarginatæ insertæ. *Germ.* loculis polyspermis. *Stylus* filiformis. *Stigma* hispidulum. *Caps.* subglobosa, 3-locularis, 3-valvis, valvis medio septigeris. *Semina* pauca, subangulata, umbilico nudo. *Embryo* curvatus. BROWN *mutatis terminis.*

Specific Character and Synonyms.

ARTHROPODIUM *cirratum;* racemo diviso, bracteis foliaceis, pedicellis fasciculatis, petalis interioribus integerrimis, filamentorum dimidio barbato basi biappendiculato, foliis lanceolato-ensiformibus. *Brown* Mss.

ANTHERICUM *cirratum;* foliis lanceolatis planiusculis: scapo paniculato, filamentis bicirratis. *Forster Prodr. fl. Austr. p.* 24. *Willd. Sp. Pl.* 2. *p.* 146.

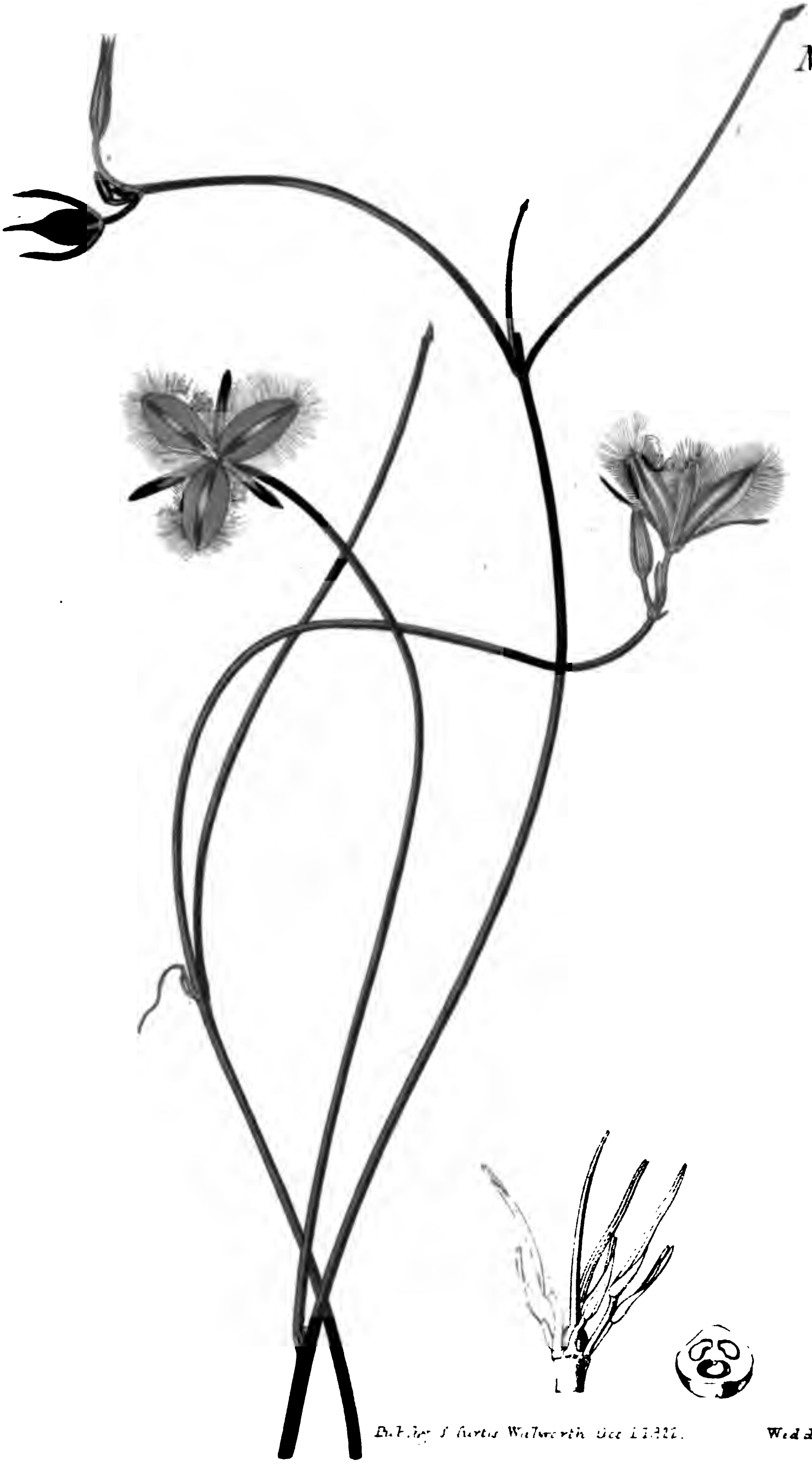
ANTHERICUM latifolium. *Banks and Soland.* Mss.

Another species of ARTHROPODIUM, the *paniculatum,* will be found at No. 1421 of this work; from which our present plant differs in the much greater width of the leaves and revolute bractes; greater size of its white flowers; and both from that and every known species in the greater length of the spur-like processes at the base of the bearded part of the filaments, of which Mr. BROWN could only trace mere rudiments in any of the other species; in the entire margins of the inner petals; and in the thicker root, approaching to tuberous.

Native of New Zealand, where it was discovered by Sir JOSEPH BANKS and Dr. SOLANDER, in their celebrated voyage to the South Seas and round the world, with Captain COOK.

Has been treated as a greenhouse plant, but Mr. MILNE thinks it may prove hardy. Flowers in May and June. Communicated by Messrs. WHITLEY, BRAME, and MILNE of the Fulham Nursery, where it was raised from seeds given them by the Rev. WILLIAM WOOD, to whom they were sent by——BIGGE, Esq. late commissioner in New-South-Wales.

N.2351



Pub. by S. Curtis Walworth Oct 1.1822. Weddell Sc

THYSANOTUS JUNCEUS. RUSHLIKE THYSANOTUS.

****

Class and Order.

HEXANDRIA MONOGYNIA.

Generic Character.

Corolla 6-petala, patens, persistens; petalis interioribus latioribus, limbo utrinque colorato, marginibus fimbriatis ciliis articulatis. *Stamina* 6, (raro 3,) imæ corollæ inserta, vel hypogna, declinata. *Filamenta* glabra, brevia. *Antheræ* lineares, emarginaturæ baseos insertæ: 3 interiores sæpius elongatæ, reclinatæ. *Germen* loculis dispermis. *Stylus* filiformis, declinatus. *Stigma* parvum. *Caps* 3-loularis, 3-valvis, valvis medio septiferis. *Semina* bina, altero erecto, altero pendulo, strophiolata. BROWN *mutatis terminis.* Chlamysporum. SALISBURY.

Specific Character and Synonym.

THYSANOTUS *junceus;* radicibus fibrosis, caulibus ramosis diffusis teretibus striatis: ramulis subangulatis, foliis radicalibus abbreviatis caulinisque strictis patenti-erectis, umbellis paucifloris, antheris inæqualibus. *Br. Prodr.* 283.

CHLAMYSPORUM *juncifolium;* foliis linearibus integerrimis: spicis laxe paniculatis, ipsis confertissimis: antheris recurvis, alternis longissimis. *Salisb. Parad. Lond. t.* 103.

Our plant did not appear, at the time we received it, to have either radical or cauline leaves to be distinguished from the rush like, rounded, streaked stems, branched, toward the top, into a few, divaricate, slender, somewhat angular branches, bearing few-flowered umbels; one flower

only expanding at a time, which is of short duration, but very beautiful on account of the delicately fringed internal petals. The outer petals are linear-lanceolate with a powdery pubescence at the apex. The inner ones are like the outer, except being bordered with a very broad margin beautifully fringed. Both series of laciniæ are persistent, the outer ones remaining more or less spread, whilst the inner close round the oval, trilocular capsule containing two seeds in each cell. *Stamens* 6. *Filaments* short, yellow, attached below the germen; three of them alternating with and three opposed to the petals; the former bear short, twisted anthers, yellow with purple tips, the *anthers* of the latter are more than twice the length of the other, linear, purple and hardly seem to be polliniferous. The *style* is longer than these, curved, purple.

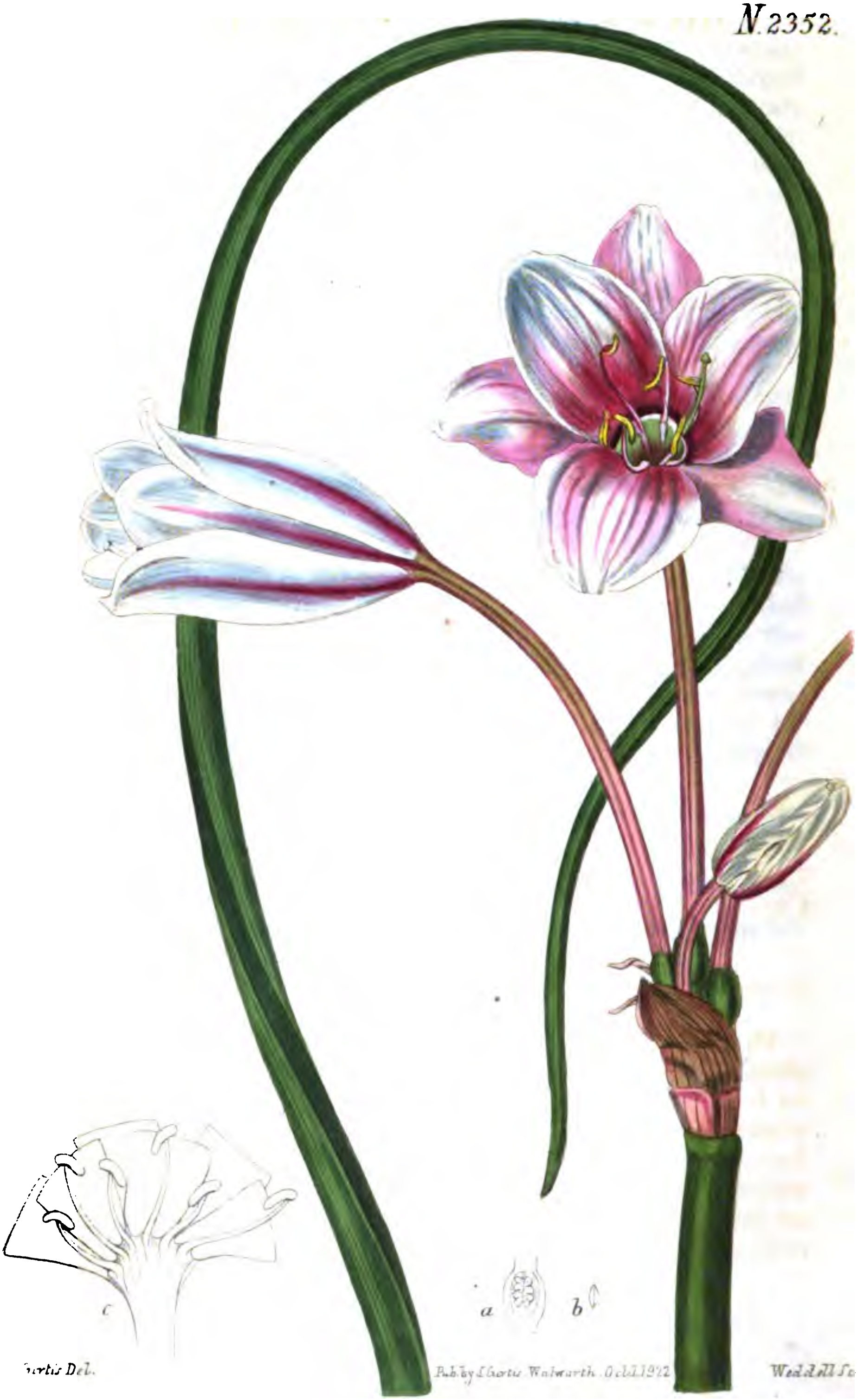
Mr. BROWN places this genus in his natural order of *Asphodeleæ,* in which however he includes several of JUSSIEU'S *Asparagi;* but remarks that from its near affinity with ARTHROPODIUM it comes nearer to ANTHERICUM than to the *Asparagoideæ* of that order, with which Mr. SALISBURY connects it.

For this very rare plant we are indebted to Mr. JOSEPH KNIGHT of the Exotic Nursery, King's-Road, who raised it from seeds he received from New South Wales, in the spring of 1820. He observes that it is delicate and requires to be kept in an airy sunny situation, in the greenhouse, during the winter months. Propagated most readily by seeds, but may also be increased by cuttings. It flowered in July last.

Native of the country round Port Jackson where it was first discovered by Mr. ROBERT BROWN.

The outline figures shew the parts of fructification magnified and section of the capsule.

N. 2352.



rtis Del.　Pub. by S. Curtis Walworth. Oct. 1. 1822　Weddell Sc

(2352)

CRINUM AQUATICUM. AQUATIC CRINUM.

****

Class and Order.

HEXANDRIA MONOGYNIA.

Generic Character.—Vide No. 2292.

Specific Character and Synonyms.

Sect. II. Semipatentes. *Subdiv.* 2. Longifoliæ vel inclinatæ.

CRINUM *aquaticum,* bulbo ovato; foliis 4-pedalibus, canaliculatis, tortuosis, viridibus, margine scabro; spathâ rubrâ, unciali, imâ parte integrâ, apice diviso; pedunculis sub-uncialibus; loculis 8-spermis; tubo triunciali; limbo 2-unciali, albo striato, seriùs rebescente; stylo temere vel incurvato vel declinato; filamentis divaricatis apicibus conniventibus (an semper?), basi sub-gibbosâ, membranâ crassâ, conspicuâ, faucem tubi exsuperante, laciniisque adhærente connexis, exterioribus unciam, interioribus ¾ stylo brevioribus; stigmate crasso, rotundatè trigono, viridescente; floribus successivis, odoratis.
CRINUM aquaticum. *Nobis in appendice, p.* 22.
CRINUM campanulatum. *In spec. enum. supra* 2121.
CRINUM aquaticum. *Burchell catalogus geographicus plantarum Africæ australis extra-tropicæ. No.* 3785. inedit.

DESCR. *Bulb* ovate; *leaves* four feet long, green, deeply channelled so as to appear cylindrical, tortuous, pointed, an inch and half wide near the base, with a rough margin; *scape* green, about fourteen inches long: *spathe* red, one inch long, the lower half undivided, the upper 2-cleft; *umbel* about 4-flowered, with slender *bractes; peduncles* an inch or less in length, green; *germen* short, green; cells eight seeded; tube slender, a little curved, about

three inches long, red streaked with green; *limb* about two inches long, glossy white with a red streak on each segment near the base, becoming after a while deep rose-coloured without and mottled with rose-colour within, campanulate with the points reflected, the inner segments near an inch wide, obtuse, the outer narrower, hooked; *style* pale red, irregularly incurved or declined, a little shorter than the limb; *stigma* large, triangularly rounded, yellowish green; filaments pale red, diverging with the points conniving (Quære whether always?), the outer an inch, the inner ¼ shorter than the style, united at their base which is a little gibbous by a conspicuous glossy green fleshy membrane adhering to the base of the limb. N. B. The stigma became larger and yellower after the drawing was completed. This plant was discovered by Mr. Burchell in the E. of the Cape colony in shallow grassy ponds, liable to be dried up in summer. The figure was made from a specimen produced in May by a bulb given by Mr. B. to the Earl of Carnarvon. It is a hardy green-house plant, not requiring constant immersion. The flowers have a powerful fragrance, a little resembling that of C. *capense.* The glossy white of the young flowers, and the deep rose-colour of those which are older, form a beautiful contrast. The figure represents the inside which is only mottled; the outside becomes entirely red. The conspicuous waxy thick membrane appears to be only an extraordinary enlargement of the same process which is distinguishable in C. *erubescens*, and C. *flaccidum;* and perhaps the posture of the filaments is not invariable, since those of C. *arenarium* and *defixum* diverge and connive when the flower begins to collapse. The particles of pollen perhaps smaller than those of any other species, and the one-leaved spathe is an anomaly in the genus. Its foliage much resembles that of C. *capense* but without the glaucous hue, and is still more like that of C. *crassifolium,* appendix, p. 23, which last appears to be the Amaryllis *revoluta,* var. B. of the Bot. Reg. 615, a plant differing in habit and perennial foliage from C. *revolutum,* which is Amaryllis *revoluta,* var. A. of the Bot. Reg. 623. If it had been ascertained that the short filaments of C. *aquaticum* always connived, considering its other remarkable features, we should have detached it from the genus Crinum under the name Crinopsis. *W. H.*

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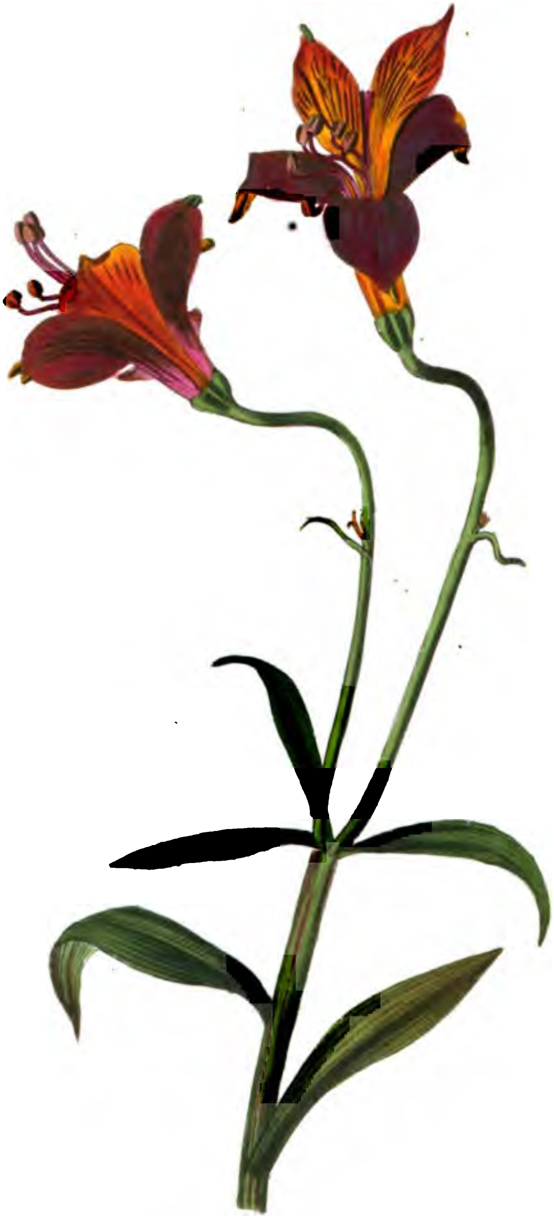
a. Cell shewing eight ovules. b. Particle of pollen magnified.

c. Dissection to shew the stamens, and the connecting membrane at the faux of the tube.



Pub. by S. Curtis Walworth Oct 1 1822. Weddell sc.

ALSTRŒMERIA PULCHELLA. SPECKLED ALSTRŒMERIA.

****

Class and Order.

HEXANDRIA MONOGYNIA.

Generic Character.

Cor. 6-petala, subbilabiata: petalis duobus inferioribus basi tubulosis. *Stamina* declinata. *Germ.* inferum, 3—6-angulare.

Specific Character and Synonyms.

ALSTRŒMERIA *pulchella;* caule erecto, foliis sessilibus lanceolatis, pedunculis involucro longioribus, petalis recurvo patentibus acuminatis subæqualibus: duobus erectis maculatis angustioribus.

ALSTRŒMERIA pulchella. *Lin. Suppl.* 206?

ALSTRŒMERIA *Ligta;* caule erecto, foliis lanceolato-linearibus, floribus umbellatis, petalis subconformibus. *Flor. Peruv.* 3. *p.* 59?

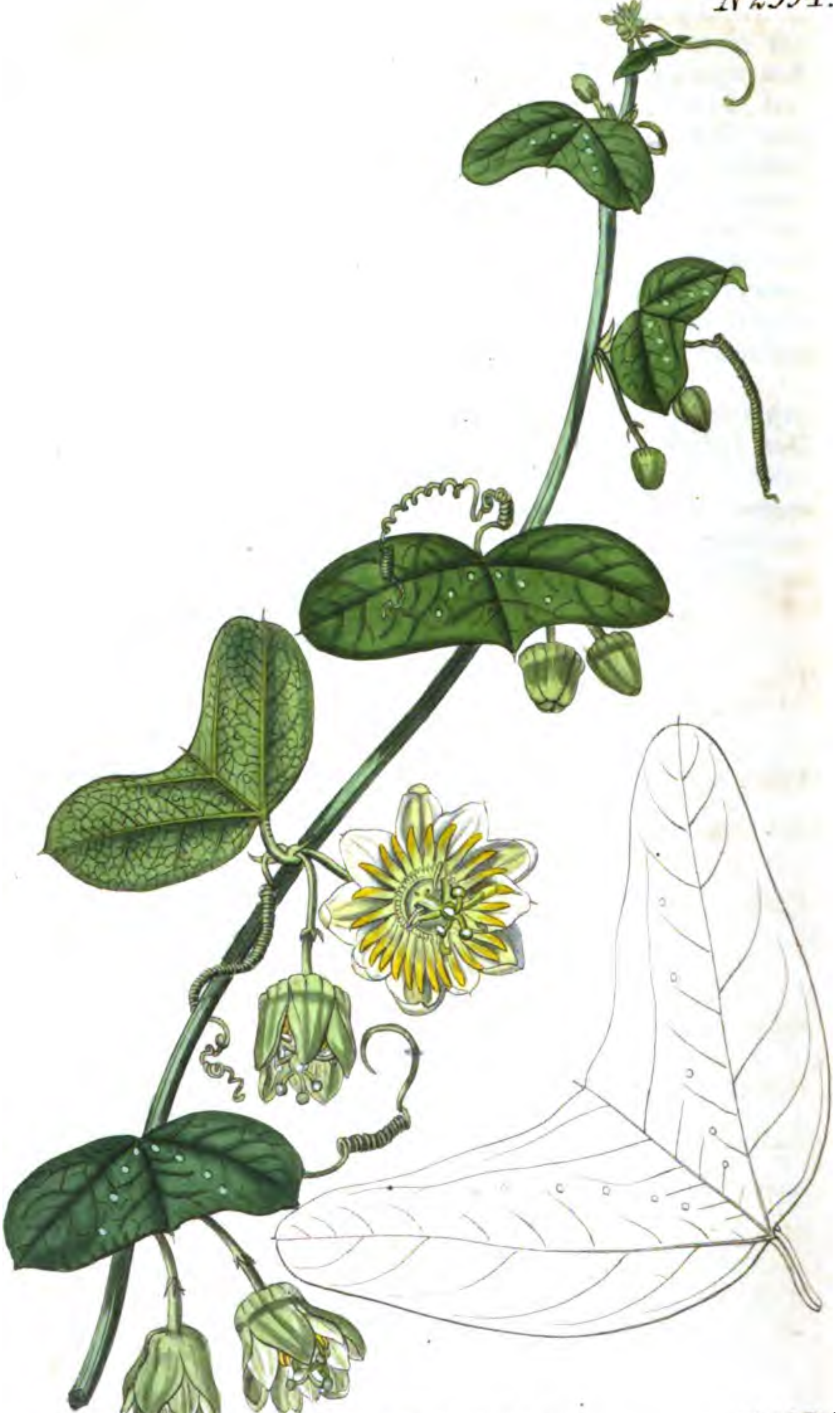
HEMEROCALLIS floribus purpurascentibus striatis *vulgo* Ligtu. *Feuill. Peruv.* 2. *p.* 710. *t.* 4. vix dubia.

Although we have very little doubt but that our plant is the same species as that described and figured by Father FEUILLÈE, and referred to by LINNÆUS as a synonym of A. *Ligtu,* and consequently that the species published under that name at No. 125 of this work, is not the original *Ligtu;* yet as that plant is now well known in Europe by this name, we think that any attempt to restore the original appellation, were we quite certain of the error, would only add to the confusion. Not to increase unnecessarily the number of species we refer our plant to A. *pulchella,* under which name we received it, though we confess that it does not well agree with the description in the Supplementum

Plantarum; and we do this the more readily as there is no species described in the Flora Peruviana by the name of *pulchella*, which was taken up by Linnæus from a drawing only. There is no figure of ALSTRŒMERIA *Ligtu* in the Flora Peruviana of RUIZ and PAVON, the drawings and dried specimens of that plant being lost by shipwreck, but their description disagrees in very few points with our present subject; and they refer to FEUILLEE's figure without stigmatising it as *bad;* a character given it by WILLDENOW, and which it well deserves, if intended to represent the plant now known by that name. The specimens preserved in their Herbarium now in the possession of Mr. LAMBERT, as A. *Ligtu*, are more like our plant than the one which is so called at present; but perhaps may be only varieties of *Pelegrina*.

Our drawing was taken from a weak plant; a stronger may probably produce more flowers in the umbel and consequently a greater number of leaves in the involucrum. Communicated by Mr. ANDERSON from the Chelsea garden in June last; where it flowered in the greenhouse. Native of Chili whence the seeds were received in 1820.

N 2354.



werby. Del. Pub by S. Curtis, Walworth . Oct 1.1822. Weddell Sc.

PASSIFLORA LUNATA. CRESCENT-LEAVED PASSION-FLOWER.

****

Class and Order.

MONADELPHIA PENTANDRIA.

Generic Character.

Cal. 5-partitus, coloratus. *Cor.* 5-petala, calyci inserta. *Nectar.* Corona filamentosa. *Pepo* pedicellata.

Specific Character and Synonyms.

PASSIFLORA *lunata;* foliis bilobis punctatis basi subcordatis, petiolis eglandulosis, pedunculis axillaribus geminis, filis coronæ exterioribus compresso-clavatis.

PASSIFLORA *lunata;* foliis bilobis punctatis basi subcordatis biglandulosis, nectarii radiis exterioribus compresso-clavatis obtusis. *Smith. Ic. Pict.* 1. *tab.* 1.

PASSIFLORA *lunata;* foliis cordatis bilobis obtusis glabris, petiolis eglandulosis, pedunculis axillaribus geminis, filis coronæ clavatis. *Willd. Sp. Pl.* 3. *p.* 612. *Hort. Kew. ed. alt.* 4. *p.* 149. *Pers. Syn.* 2. *p.* 220. *n.* 21.

PASSIFLORA *biflora;* foliis bilobis semilunatis obtusis glabris subtus punctatis, caule quinquangulo, axillis bifloris. *Lam. Encycl.* 3. *p.* 36. *p.* 447. *t.* 271. *Cav. Diss.* 10. 457. *t.* 288.

GRANADILLA folio lunato, flore parvo albo, fructu succulento ovato Houstoni. *Mart. Cent. p.* 52. *t.* 52.

PASSIFLORA Vespertilio. *Miss Laur. Passion-flowers.*

DESCR. *Stem* shrubby, five-angled, climbing by means of long spirally twisted tendrils. *Leaves* alternate, three-nerved, two-lobed: lobes divaricate, obtuse, terminated with a short bristle (as is the midrib of the leaf between the lobes) reticulate-veined, marked with an irregular row of pellucid dots on the inner-side of the nerve of each. *Petioles* short, curved, *Stipules* two, subulate, persistent. *Peduncles* axillary, growing two together, jointed, with three subulate bractes below the joint, one flowered. *Calyx* (or outer segments of the perianthium) 5-cleft, green with whitish margin, concave. *Petals* (or inner segments) five, rather shorter than the calyx, white. Outer series of the *nectarium* or *corona* nearly the length of the petals, yellow, compressed, somewhat broadest a little below the point. *Germen* oval, obsoletely three-cornered, supported on a thickish column to which the *filaments* are united. *Anthers* oblong. *Styles* recurved: *stigmas* large, rounded.

Sir JAMES E. SMITH, who has given a description and beautiful figure of this plant in his Icones pictæ, remarks that the observation in the Systema vegetabilium affixed to PASSIFLORA *punctata* belongs to this plant, but not so the specific character.

We could not discover any appearance of the two glands at the base of the leaf besides the row of pellucid dots, nor do we discover them in either of the figures quoted, nor are they noticed in Sir JAMES's full description, though inserted in the specific character.

Native of Mexico and of Jamaica. Cultivated in the stove, where it blossoms most part of the year. Introduced by Dr. WILLIAM HOUSTOUN in 1733.

The outline figure represents the leaf of a variety received from JOHN WALKER, Esq. except in foliage, differing in nothing from our plant.

N2355.

(2355)

Crinum arenarium. Water-island Sand Crinum.

Class and Order.

Hexandria Monogynia.

Generic Character.—Vide No. 2292.

Specific Character.

Sect. 1. Patentes. *Subdiv.* nutantes.

Crinum *arenarium*, bulbo ovato, foliis bipedalibus margine sub-scabro, scapo pedali, umbellâ 5-florâ breviter pedunculatâ, germine ¼-unciali, tubo sub-4-unciali viridescente, limbo sub-3-unciali albo, stylo laciniis et filamentis longiore.

Descr. *Bulb* ovate, covered with whitish brown coats. *Leaves* two feet long, one inch and half wide, and a little purple near the base, tapering towards the point, with the edges a little rough, rather more glaucous, and less erect than those of *americanum*, which they much resemble. *Scape* near a foot, green. *Spathe* one inch and half. *Umbel* 5-flowered, with bractes. *Peduncles* three eights of an inch long; *germen* quarter of an inch long. *Cells* with six ovules. *Tube* near four inches long, pale green, faintly speckled with red, at first curved, afterwards more erect. *Limb* white, two inches and three quarters long, the outer segments three quarters wide, the inner a little narrower, all terminating with a green point. *Filaments* a little knobbed at their insertion, purple except near their base, at first declined with their points curved upwards, afterwards diverging with conniving points, the base of each being embraced by the margins of the corresponding segment of the limb; the outer filaments six eights, the inner five eights shorter than the limb. *Pollen* orange. *Style* purple towards the extremity, half an inch longer than the limb. *Stigma* triangularly round, large, with long white fimbriæ. *Buds* nodding completely before expansion. *Flowers* with very little fragrance.

Bulbs of this species of Crinum were collected on the expedition to survey the coasts of Australia, in Water island on the N.W. coast, lat. 14°, 3′ S. and long. 125°, E. of Greenwich, at the entrance of Montagu's sound. The bulbs were growing about eight or nine inches below the surface of a barren sandy soil; the thermometer stood at 94 in the shade, a sea breeze blowing upon it; the ball of the thermometer being placed in the sand, it rose rapidly to 130, when it was necessary to remove it to prevent its bursting, as the scale went no higher than 133.

The *bud* represented in the figure, nodded completely the day before its expansion, which took place late in the evening; the flower retained the next morning the posture of tube, limb, and filaments, resembling that of C. *americanum;* but before noon the base of the petals began to contract round the corresponding filaments. The same change takes place in the flowers of C. *defixum* when they begin to fade. The specimen was sent at the end of May from Lord CARNARVON'S stove at Highclere. Bulbs apparently of the same species have been since collected at Cape Flinders, lat. 14°, 10′ S. long. 144°, 18′ E. *W. H.*

Erratum in last Number.

Page 2343, line 1 and 12, *for* tuberosa *read* tuberosum.

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(2.

O Botanical magazine.

AN

APPENDIX.

BY

THE HON. AND REV. WILLIAM HERBERT.

WITH PLATES.

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PRELIMINARY TREATISE.

It was my original opinion that a large group of African bulbs belonged properly to the genus Amaryllis (taking Belladonna, upon which species it was founded by Linnæus, for the type), and that the two extremities of the genus, viz. Belladonna and Undulata, had been improperly cut asunder by the erection of several intermediate species into the genus Brunsvigia. I was, however, induced, by the appearance of the smooth pearl-coloured purpurascent seeds of Belladonna and Blanda, and their obstinately refusing to breed with Undulata and others allied to that species, to give up my first notion, and to define the genus Nerine consisting of a detached group which could only be connected with Amaryllis Belladonna through some of the Brunsvigiæ. The great difficulty in making a perfect arrangement presents itself in the genus Brunsvigia, which has never been clearly defined, though widely adopted, and of which the reputed species exhibit several anomalies. The name of Brunsvigia was given by Heister to Multiflora (Am. Orientalis), which must therefore be considered as the type of that genus; but he only described the plant, and that in some respects very inaccurately, and did not define the peculiarities of the genus. The inflorescence of Josephinæ is conspicuously similar to that of Multiflora, yet its affinity to Blanda is great in the form of the bulb, the number and habit of its leaves, and the length of the tube (in which particulars it differs from the other species of Brunsvigia), and also in the insertion of the filaments, the base of the peduncles, and the very similar appearance of the bud when a few inches high. The affinity of Blanda to Falcata is likewise in many respects very striking, as may be seen at once on reference to the plates of those two species in the Botanical Magazine, which are in most respects accurate. Leaving, therefore, the name of Amaryllis to

Belladonna as applied by Linnæus, I find it absolutely impossible to distinguish the two genera by any just definition without throwing out of the genus Brunsvigia the species with straight peduncles and corolla not bent upwards; and I propose, as the only means by which the genus Brunsvigia can be preserved, to detach Marginata by itself, and those with spreading filaments and non-undulated corolla, under the name of Ammócharis; i. e. *delight of the sandy plains, in which they are chiefly found.* Mr. Ker has been desirous of resting the distinction of Brunsvigia solely on the elongation of the peduncles and increasing width of the upper part of the capsule, without reference to the corolla; and I should have been very glad if I could have found that feature coincide with others of greater importance; but there is a disposition in many of the Amaryllideæ to elongate their peduncles: I have seen them greatly prolonged in Vittata, as well as Cyrtanthus Angustifolius *(Bot. Mag.)*; in Crinum Capense very much; in C. Erubescens occasionally to more than an inch, though usually its capsule is almost sessile; and in C. Flaccidum to more than four inches. C. Revolutum, from being almost sessile, acquires a peduncle an inch long; and in many others this habit is observable. It is therefore a feature upon which no sure dependence can be placed as a generic distinction. But, in this case, though most of the plants united in the Bot. Mag. and Reg. under the name of Brunsvigia, have a striking disposition to it, it could not be adopted as the boundary of the genus without the obvious inconsistency of throwing out of the genus Josephinæ (which produced seeds that germinated in Mr. Burchell's garden without a prolonged peduncle or an attenuated capsule, but with a conformation exactly similar to that of A. Belladonna and Blanda, as may be seen by reference to his drawings) and Coranica (which bore seeds from which bulbs were raised in the same collection, without elongating its peduncles), and thus separating Coranica from Falcata, though the most skilful observer cannot distinguish the two species except by the inflorescence or capsule; and Josephinæ from Multiflora, of which the blossom is strikingly similar. I do not mean to assert that Josephinæ and Coranica may not sometimes elongate their peduncles, which I think very probable, but merely to show the uncertainty of the feature. The elongation and greater divarication of the peduncles appears to take place most decidedly in the species which have the most numerous flowers, as Toxicaria with upwards of 100, and Ciliaris with more than 200 flowers; and I have known the elongation of C. Erubescens occur in the centre flower when the umbel had more than its usual number, appearing to be a resource of nature, to give room for the capsules; on which account the divarication also takes place in Hæmanthus. It will be found that B. Radula, from the want of tube, approaches to the genus Nerine; but the two broad recumbent leaves, the wide short spathe, the obovate germ, the bending of the peduncle, the petals not undulated, and the obtuse stigma, send it back to the group of Brunsvigia. Lucida (Am. Laticoma, Bot. Reg.), in its rounder germ, approaches to the genus Nerine, and in its leaves and time of flowering to Ammocharis Falcata; but those points alone do not appear sufficient to justify its erection into a genus by itself, especially as Josephinæ differs quite as much from the other Brunsvigias, both in leaf and germ: and, on reference to the fine specimens in Mr. Burchell's herbarium, I find that Lucida has a tube one fourth of an inch long, like B. Striata; which, as well as its non-undulated petals in posture like those of B. Radula, its bent peduncles, and its stigma (which is very shortly lobed, and not deeply trifid, like Nerine), send it likewise to the genus Brunsvigia. I have found it absolutely necessary to detach altogether Am. Marginata of Jacquin, on account of the anomalous features it presents. It has the tube, spathe, foliage, stigma, and germ of Brunsvigia; the form, colour, and posture of the limb of the coroll, and the posture of the germ and filaments, like Nerine Curvifolia. The smell is fetid, which is peculiar to itself; and it cannot be placed in any of the other genera without confounding the distinctions of all. I have given it the name of Imhofia, which was originally applied by Heister to Sarniensis; but I believe it was never adopted, nor any definition of the genus given by him. If I had been originally aware of his name, I would have taken it at first for the group to which Sarniensis belongs instead of Nerine; but, as the name Nerine has been used in the Bot. Mag. and Hort. Trans. and the definition and particulars of the genus detailed, I think it will be much more convenient to cultivators and botanists to retain Nerine as I have used it, and to transfer Heister's dormant name Imhofia to the nearly-allied Marginata. If I am wrong in taking this liberty with his Imhofia, for the convenience of the public, those who object to it may transpose the names, and refer Nerine to Marginata.

The genus Nerine exhibits a diversity of coroll between some of its species which have the germ, petals, and filaments bent and distorted, and others in which they are more regular; but I do not consider them separable on that account, because the bending does not seem to be a regular curvature in the construction of the peduncle, but a distortion of the flower in consequence of a premature attempt of the ovules swelling in the upper cell to burst the valve, in consequence of which the under side of the germen, which subtends the angle of the upper cell, is forced downwards, and the flower distorted. I have seen a distortion nearly similar occasioned in Curvifolia, of which the coroll is usually regular, by the swelling of a larger seed than common; and the coroll of Undulata sometimes remain regular when the plant was weakly and not disposed to bear; and I find in the mules from Undulata, of which the ovules are imperfectly formed, no distortion of the flower or declination of the germ. In every other important point the several species perfectly agree. I am told that in some foreign catalogue the name Loxanthus has been given to the Nerines with petals curved upwards, intending to include Lucida and Radula; but, for the reasons just stated, they could not be included without breaking down the divisions by which this and the foregoing genera are distinguished, and confounding them all with Amaryllis again. If such a genus were established, it must therefore be confined to Flexuosa, Humilis, and Undulata; and I have already pointed out that I do not think that separation expedient.

I see no other mode by which these bulbs can be distinctly arranged. If the habit of elongating the peduncle more than usual, were taken as the fundamental generic feature, without regard to the filaments, stigma, and coroll, the species excluded by that uncertain feature would remain in a chaos, from which they could not be extricated. If, on the other hand, a division were attempted according to the posture of the petals only, confining Brunsvigia to Multiflora, Josephinæ, and Striata; uniting Radula and Lucida with Humilis, Flexuosa, and Undulata, and adding Marginata to Curvifolia, Corusca, Sarniensis, and Rosea; we should intermingle the non-undulated petals and obovate germ, the broad leaves and spathe of Brunsvigia in three several genera, and introduce the tube into two genera to which it should not belong; each of which would thus afford anomalies as great and more abrupt than would be found in the whole group of those genera, if united under one character, as Amaryllis, which would stand thus:

AMARYLLIS,

Including Ammocharis, Brunsvigia, Imhofia, and Nerine, under one character with Belladonna and Blanda.

Bulb round, or ovate, or oblong-ovate. *Leaves* bifarious, generally later than the scape (except in Lucida, Falcata, and Coranica). *Scape* with from six to above 200 flowers. *Germ* triangularly round or inversely ovate, continued from the peduncle or bent downwards. *Petals* equal or alternately equal, undulated or not, more or less patent with reflex points, or bent upwards. *Filaments* adhering to the base of the petals, those attached to the inner a little higher, of alternate lengths, curved, or occasionally curved. *Tube*, or *short nectarious cavity*, with the sides equal and not abbreviated underneath, as in Hippeastrum. *Stigma* either obtuse, or 3-lobed, or trifid. *Capsule* 3-valved, 3-furrowed, 3-celled, usually burst by the growth of the seeds. *Seeds* fleshy, irregularly round or oval, often angular by contact, pearl-coloured or green, sometimes becoming purple on the side exposed to the light.

The principal objections to such a comprehensive definition would be, that it would include a greater diversity in the number of flowers and appearance of the coroll, germ, leaves, and seed, than occurs in any other genus of the same family; and that the posture of the germ, in consequence of the bending of the peduncle, appears to be a steady and important feature amongst the Amaryllideæ (and with reason, because it appears to influence the filaments; and also because a germ on a straight peduncle may become sessile in some particular species without disturbing the character, which cannot be the case with a bent peduncle): and it seems that this African group contains a chain of genera approaching to each other, but divisible in the manner I have proposed. My only doubt with respect to the subdivision, is whether Radula and Lucida, of which I have not seen the flowers in a fresh state, are not both anomalous plants, which ought to stand apart from Brunsvigia and single; but I am unwilling to multiply names, and without more perfect knowledge of their inflorescence and fructification, I cannot venture to detach them. The idea that the dropping of the peduncles into a more spherical posture belongs peculiarly to the bulbs called Brunsvigia in the Bot. Reg. is erroneous. On reference even to the plate of Amaryllis Blanda, Bot. Mag. 1450, the same habit will be perceived; for the faded flowers in the umbel there represented, had certainly not expanded with the downward slope into which they afterwards fell to make room for the later buds. All the species of the foregoing genera are confined to the South of Africa, unless Sarniensis be really indigenous in Japan, which I do not believe, because it is very unlikely that one species of a large group, which is otherwise local, should be found both amongst its congeners and in a remote insulated situation. I am confirmed in the idea which I suggested, that Thunberg had confounded it with Lycoris Radiata, by discovering a specimen of Radiata from Japan in Mr. Lambert's herbarium.

Of the African species with fleshy seeds, there remains only to consider the plants which I have detached from the genus Amaryllis and added to Crinum. Mr. Lindley has stated in his Coll. Bot. article A. Vittata, that I have done so injudiciously, but he has assigned no reasons, excepting an assertion, which I am persuaded on mature consideration he will have the candour to retract, that Pancratium is more nearly allied, than the Amaryllides in question, to the genus Crinum, in which I have placed them. I can bring to mind but one point* of agreement between Crinum and Pancratium, in which the Amaryllides added to Crinum differ, viz. the slender proportion, and consequently reflected or pendulous habit of the petals, which are too narrow to support their length. To this may be added, the diverging posture of the filaments, in consequence of the wider expansion of the petals by which they are drawn apart. On the other hand, I can point out about fourteen important points of agreement between those plants and the rest of the genus Crinum, in which they differ from the occidental fleshy-seeded division of Pancratium, by which (if at all) they must be connected.

1. Leaves multifarious, excepting one species, which is not however perfectly bifarious.
2. The same leaves shooting again after the bulb has been dried.
3. The buds inclining or nodding before expansion (unless the division or genus, to which P. Nutans, Amancaes, and Calathinum belong, have a similar habit.
4. The decay of the dissepiments within the capsule.
5. The seeds never prematurely bursting the capsule outwardly.
6. The capsule not having valves, but rotting when ripe, and bursting at random and often crossways.

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* I am aware of an appearance somewhat similar in the knobbed base of the filaments in C. Erubescens and P. Illyricum; but the division of Pancratium, to which that species belongs, is widely separated from Crinum by its black-shelled seeds, and Am. Longifolia var. longiflora of the Bot. Reg. has also knobbed filaments.

7. The similarity of the seeds, which are unlike those of Pancratium.
8. The tube in some species persistent, which is always perishable in Pancratium.
9. The tendency of the points of the filaments to bend upwards.
10. The insertion of the filaments and absence of the cup, and of course of the occasional adhesion of the petals to it, as in P. Litorale.
11. The germ being in several species pedunculated, which in the fleshy-seeded occidental Pancratiums is always sessile. I do not speak of the very distinct genera included under the name by Ruiz and Pavon.
12. The form, posture, and attachment of the ovules.
13. The pollen, of which the particles are rough and adhesive in that division of Pancratium.
14. The stigma triangular or 3-lobed, and fimbriated on the top, instead of round and circumfibriated.

The new species differ perhaps in having the alternate filaments thicker.

The first eight of those corresponding features also distinguish the bulbs I have added to Crinum from the original Amaryllis of Linnæus, Belladonna, and its real congeners; to which eight may be added,

9. The germ widest in the middle, instead of being wider at the upper extremity.
10. The tube slenderer instead of wider than the germ.
11. The greater proportional length of the tube.
12. The flowers not appearing before the leaves.
13. The filaments, which adhere to the outer petals, not being joined by a web to the base of the inner petals.

Other points of agreement with Crinum separate them still more widely from the occidental bulbs which I have heretofore called Amaryllis, but in deference to the type of Linnæus, propose now to call Hippeastrum or Knight's-star-lily. No. 12 is but partly applicable here.

14. Germ straight, and not declined from a curved peduncle.
15. Tube continued straight from the germ and not declining, that is to say, not set on with a slope.
16. The mouth of the tube straight, instead of slanting in consequence of the abbreviation of the lower side.
17. Alternate (though with some capricious irregularity), instead of regular fourfold diversity of petals and filaments.
18. Nearly equal alternate, instead of fourfold insertion of filaments.
19. The filaments not lying in the channel of the lower petal.
20. The scape and peduncle solid instead of hollow.

I apprehend, therefore, that no person who applies an unprejudiced mind to the subject can think that the bulbs which I have added to Crinum ought to continue attached to either the genus Amaryllis, as founded upon Belladonna, or to the occidental bulbs which I now call Hippeastrum. The only question, therefore, must be whether they properly unite with Crinum, or should rather form a genus by themselves. It must not be overlooked that A. Longifolia (my C. Capense) breeds as freely from the impregnation of any Crinum according to the old definition, as from its own pollen; that we have already obtained mule seedlings or seed from that plant, by Toxicarium, Brevifolium, Pedunculatum, Canaliculatum, Erubescens, Cruentum, Defixum, and Lorifolium *, besides three intermixtures between the tropical species I have added to Crinum, and bulbs of the old family. When, therefore, the facility with which they breed together (refusing, as far as we have tried, to cross with any other genera), is considered, in addition to the many points of agreement above detailed, I think it will be admitted that there is a strong primâ facie case in favour of my arrangement, and that at least it ought not to be disposed of as injudicious, without much stronger reasons than the observation concerning the affinity of Pancratium, which I trust I have shown to be inaccurate; and it would seem to me preposterous to propose dividing the genus on account of some trifling feature of variation, and annoying the public by a new coinage of additional names upon such insignificant grounds. I have, however, divided the genus Crinum into two sections, and those sections into subdivisions; and I think a view of the manner in which the divisions of the two sections cross each other, will show the propriety of considering the whole as one genus.

1st Section	*Patentes*	*spread-flowered.*
1st Subdivision	Nutantes	buds nodding.
2d Subdivision	Inclinatæ	buds inclined.
2d Section	*Semipatentes*	*half spread.*
1st Subdivision	Ornatæ, or nutantes	buds nodding
2d Subdivision	Longifoliæ, or inclinatæ	buds inclined.

There is a doubt whether Linnæus's A. Ornata was C. Broussoneti (Bot. Mag.), or my C. Yuccæides. The specimen in the Banks. Herb. from Kew bearing date only three years after the name was given by the younger Linnæus in this country, appears to be Broussoneti, and Yuccæides of the same herbarium to be my Yuccæides. Mr. Salisbury has reasons for thinking he can trace my Yuccæides through the Marquis of Rockingham's collection to be Linnæus's Ornata; but, as the name Ornata has been applied to so many allied species in various works, I think it much best to retain the specific names Broussoneti and Yuccæides, and to give the name Ornatæ to the group to which they belong. I should recommend the name Ornataria, formed from Ornatûs, after the manner of Sanguinaria and Crotalaria, to those who think it deserves to be erected into a genus by itself, to which I am decidedly adverse.

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* Not exactly Lorifolium, but a plant sent from Calcutta under that name, appearing to be an accidental mule between that plant and Defixum.

It is said that the plants which, agreeing with Dr. Roxburgh, I have added to the genus, and which form its second section, differ from the former in having irregular corolls and bent filaments; but the fact is not exactly so. There is a disposition to an alternate, though not very regular, inequality of the petals (the inner being the widest) throughout the whole genus, and the alternate inequality is greater, perhaps, in no species than in C. Erubescens var. major. In the broader and shorter petals the capricious irregularity of their width becomes more conspicuous, and perhaps in some, particularly C. Zeylanicum, it may be proportionably greater. I have observed that in the Ornatæ, which have the tube most bent, the upper petals and filaments (principally the upper inner petal and filament) are generally of inferior dimensions, perhaps in consequence of their nourishment being checked by the bend of the tube; but this variation does not appear reducible to any certain rule. Throughout the whole genus the filaments attached to the widest petals are rather the longest, and the filament belonging to a petal of unusual width seems generally longer than those which should correspond with it: but all these variations seem capricious and uncertain, though subject to the general law, that the outer petals and filaments are the least. Nor is it true that the first and second section are distinctly separated by the bending of the filaments. I do not even consider the upward bending of the point of the filaments to be, of itself, a very important feature amongst the Amaryllideæ; because the fact is, that there is a general disposition in the points of the filaments to aspire, and that their being bent or straight depends mainly upon the posture of the flower; and in the umbels of A. Blanda and Nerine Curvifolia they will be straight in the erect central flowers, and bent in those which are sloped. Conniving anthers afford a much more important feature, because it is of itself a peculiar character, and not the consequence of posture: but the bending of the points is chiefly important when it arises from the invariable slope of the germ from the peduncle or the corolla; and in that case it is the posture that really gives the character to the genus. Amongst all the Crinums, the bending of the points of the filaments appears to be, in a great degree, proportionable to the curvature of the tube, being less in those of which the attitude is more erect; and both the curvature of the coroll and of the filaments is less in a low temperature. The points of the filaments are more bent in C. Americanum of the first section, which nods, than in C. Capense of the second, which only inclines; and as much so even in Toxicarium and Brevifolium. The only features which appear to distinguish the second from the first section, besides expansion, are, that mostly the filaments are alternately thicker, more fasciculate by the downward bending of the upper three, and less knobbed at their point of insertion; and that the margin of the inner petals, which at its base adheres to the filament of the outer petal at the point of insertion, gets stronger hold of it in the broader sorts, because their breadth at the mouth of the slender tube brings the margins of the inner petals in contact with each other, and scarcely leaves room for the filament between them. But the knob to the filaments does not extend through the whole of the first section, and is scarcely observable in Crinum Amœnum; nor does the downward bending of the upper filaments seem to be a distinct feature. In both sections the species of the subdivision that nods have the tube and filaments more bent, the second section having the greatest disposition to bend, but its inclining subdivision not much more than the nodding part of the first section, though the expansion of the petals amongst those draws apart the filaments, and prevents their fasciculation. The reason why the Ornatæ have them most declined and the tube most curved appears to be, that the substance of the whole flower in these species is considerably thicker, and, after having nodded, the tube and filaments do not relax their posture so readily as the more flaccid sorts, but remain bent with an upward direction of the points of the genitals. In those species, by the downward curve of the upper filaments, the hinge is turned the wrong way, marking the petals with a little knob outwardly, and consequently the upper petals expand less than the lower, which are favoured by the downward curve and drop a little. If the less expansion of the petals, the greater curvature of the tube and filaments, and the absence of the knob-like appearance at their base always coincided, they might afford something like a generic distinction; but it so happens that those with the greatest curvature have a medium expansion, and that those which expand the least have very little more bend than the first or wide-spreading section; and, as if placed on purpose to defeat any division, stands amongst those with the very least expansion C. Longiflorum (called in the Bot. Reg. a variety of Am. Longifolia), having filaments knobbed like C. Erubescens, a straight tube, and its filaments erect and not fasciculate, and its petals not so wide as the largest variety of Erubescens. The figure in the Register is very inaccurate: I have carefully examined the flowers of Mr. Griffin's very plant from which it was made, and I find the breadth of the inner petals hardly $\frac{4}{8}$, and of the outer $\frac{4}{8}$ of an inch; the colour of the lower part of the limb almost white, of the upper part blush pink, rather deepest on the outside. The scape should have been reddish brown, and the germs not of such deep green; the peduncles $\frac{3}{4}$ of an inch long. The cells, which in C. Capense (A. Longifolia) have about 31 ovules, in C. Longiflorum have only 11 when full, some only 9 or 10. The filaments and cells mark that it is not a variety of C. Capense. Its native place is not ascertained, and if its ovules had not been apparently very perfect, I should have thought it a natural mule, between Capense and Erubescens. It is scarcely distinguishable in foliage from the artificial mules of that origin, which have not yet flowered. I believe that, with the exception of Longiflorum, the species of the 2d § will be found to have the alternate filaments a little thicker.

I have sedulously sought for some further distinctions by which the subdivisions might be characterized, and it will be observed that the peculiarities of the different groups cross each other in the two sections, which is important to show that the whole forms one genus; and it is possible that some of the less known species may be found to depart from the subordinate distinctions stated concerning the subdivisions. It will be seen that, for the most part, in both sections the pedunculated species only incline the bud, and the sessile or subsessile nod; that in one section the pedunculated, in the other the sessile, have non-undulated leaves. Any generic division, by the number of ovules in the cells or the form of the bulb, is defeated by the absence of any corresponding peculiarities. Of the first section, some have 1-seeded, some 2-seeded, some 4-seeded, Amœnum 5, and, according to Roxburgh, Longifolium many-seeded cells.

Of the second, some have perhaps 2-seeded, Flaccidum about 7-seeded, Scabrum 14, Longiflorum 11, and Capense 31-seeded cells. Crinum Revolutum is stated, in the Bot. Mag. 1178, on the authority of Jacquin Am. Variabilis, to have 1-seeded cells. Jacquin, however, merely says *seeds green*, and the error appears to have arisen from the seed represented in the plate being nearly of the size and shape of one cell of the capsule; but it frequently occurs that only one Crinum seed swells in a cell or capsule, and the other ovules remain abortive. Crinum Revolutum is probably many-seeded, but I have had no opportunity of examining its germ. I have observed the filaments visibly continued or decurrent in the upper part of the tube of Crinums in all the subdivisions, which therefore agree in that feature.

Having thus disposed of the African species with fleshy seeds, I come to A. Purpurea, which in the Bot. Mag. 2113, I referred to Cyrtanthus (or rather to Cyrtantheæ, by which I mean those African genera which have seeds with a black shell and foliaceous margin, and the upper part of the tube wide and not closely embracing the style), without intending then to enter upon the consideration of a further subdivision. I cannot find any true species of Cyrtanthus, except Obliquus, on which the genus was founded. A. Purpurea stands by itself, and I have used the generic name Vallota, which I am told is adopted in some French Catalogues from a paper by Mr. Salisbury. To the smaller species, included under Cyrtanthus (excepting Uniflorus, Bot. Reg.), I apply the name Monella, given to one or two of them by Mr. Salisbury, who, as I understand, makes further subdivisions for which I do not find sufficient cause.

The shelly and foliaceous seeded occidental Amaryllides agreeing with Equestris, to which as a large group I had originally wished to preserve the name Amaryllis, I have named Hippeastrum or Knights-star-lily, pursuing the idea which gave rise to the name Equestris; as it appears expedient to retain the Linnæan name to Belladonna, especially as the boundaries between the African Amaryllis and Brunsvigia are so slight, that some botanists may perhaps think them insufficient. The very different nature of the seeds separates at once Hippeastrum, as well as the Cyrtantheæ, from the African Amaryllis and the genera connected with it.

A singular notion has been adopted by Mr. Ker, that Amaryllideæ sometimes bear one sort of seed and sometimes another. I can say, that after many years attention to their cultivation, I have never seen the slightest variation take place; and it would not seem to me more probable that a fowl should sometimes lay a duck's egg, or gooseberry bushes be loaded with peaches. The notion seems partly to have arisen from a plate in Jacquin, which gives two seeds of Brunsvigia Striata, one green and one blackish[*]. But the colour is not the point in question; the green seeds of Nerine become purpurascent where exposed to the sun, and in some cases seeds of that kind may perhaps become entirely dark-coloured. But the seeds of all Crinums of both sections, as well as those of Nerine, &c. consist of a fleshy substance like the eatable part of an apple, which has no separable shell, and decays altogether. The seeds of Hippeastrum have two integuments; the outer black shell may be stripped off from the internal white membrane, and will remain under ground for a year or two without rotting after the kernel has perished or vegetated. In seeds of Hippeastrum, the deposit by which the embryo is to be nourished, remains in a liquid state within the inner membrane till the hour of perfect maturity; in those of Crinum, though it does not acquire its firm texture before it is mature, it is solid and adheres inseparably to the outer membrane. Such an essential difference in the seed affords a generic distinction paramount to every other consideration. It is singular, that such important features as the fruit, and the insertion of the filaments, have not been particularly attended to in most descriptions of plants of the genera, concerning which I am treating.

Hippeastrum is divided from the Linnæan Amaryllis Belladonna by the following important features.

1. Black shelly seeds with a winged or foliaceous margin.
2. The seeds never bursting the valves prematurely.
3. The oblique mouth of the tube abbreviated on the under side by the deeper division of the petals.
4. The fourfold instead of alternate diversity of the petals.

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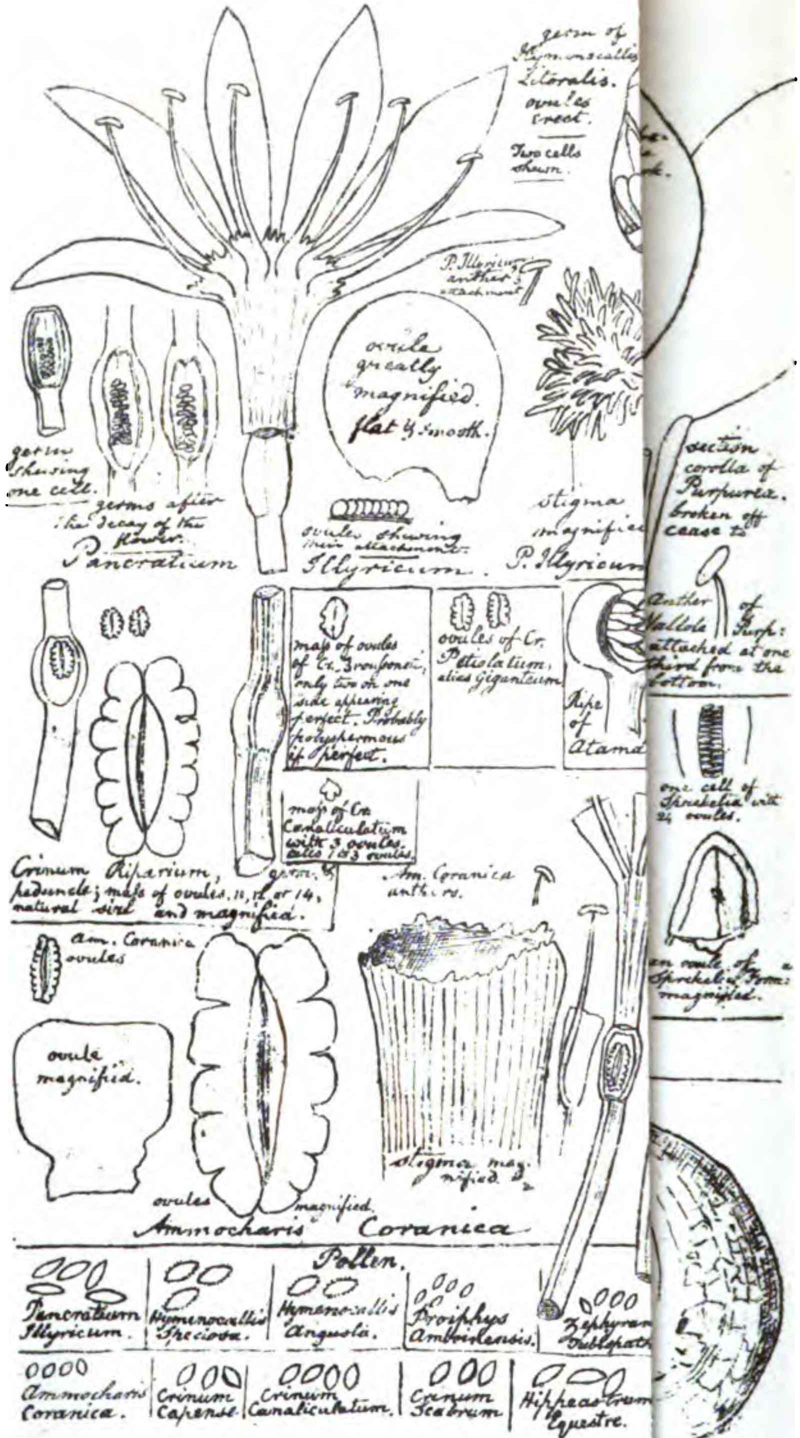
[*] There is, however, no reason but the colour given in Jacquin's figure to one of the two seeds of B. Striata, which he describes as green, for supposing that the seeds of Brunsvigia are ever dark-coloured. Those of Josephinæ, major and minor, are pale green. Those of Multiflora var. rubricaulis, now vegetating before me, as imported from Africa by Mr. Griffin, are like those of Josephinæ. Seeds of the green-stemmed Multiflora, which were ripened in a hotbed by Mr. Griffin, were also green, but larger and irregularly-shaped, like those of Falcata. I do not however imagine them to be always so; for I have seen unfertilized seeds of Nerine Uudulata in the stove become monstrous, and the hotbed was likely to favour an unusual deposit of albumen. The account in the Bot. Mag. that the seeds of B. Multiflora have a black shell, is certainly erroneous. Mr. Burchell recollects having seen them lying like green peas on their native sands. The seeds of B. Striata, represented by Jacquin, are a little pointed at one end, like the seed out of a grape.

5. The fourfold instead of alternate insertion and length of the filaments.
6. The nectarious beard or screen in several species.
7. The germ being set on in a different direction from a hollow peduncle.
8. The tube being set on in a different direction (that is sloped) from the germ.
9. The constriction of the germ in the middle.
10. Flower stems successive at various seasons (occasionally two simultaneous), and not regularly forerunning the leaves in the autumn.

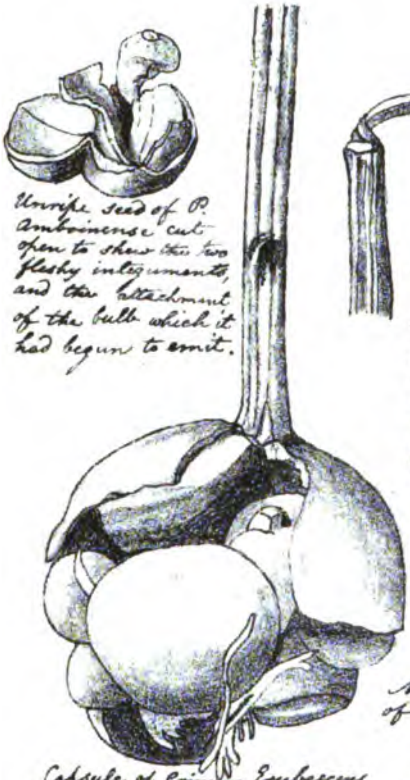
The beard or screen, in some species, at the mouth of the tube, is evidently an imperfect prolongation of the membrane, which in all the species connects the petals into a tube. It furnishes perhaps a sure distinction of the species, but the fundamental structure which defines the genus is the same in all. I should have considered Rutilum as a variety of Fulgidum, if I had not discovered a minute knob in Rutilum at the base of the upper petal, which is evidently an imperfect attempt to produce the screen, and would alone be sufficient to show the fallacy of any generic separation, founded on trifling modifications of the termination of the membrane. It is very likely that the knob may not even be visible in all specimens of Rutilum. In the mules from Vittatum by Rutilum, the beard is very faint, and in some of the seedlings not discernable without close inspection.

The genus Coburgia, consisting of A. Reticulata and Striatifolia, which are perhaps only varieties of one species, is separable from Hippeastrum only by its germ not being widened at the upper extremity, the ovules fewer and triangular, and the seeds round or pea-shaped, without a foliaceous margin. In the Bot. Mag. I had expressed a doubt whether they did not agree with Belladonna, but my recollection of the flower and seed was imperfect; and, from the arrangements of the editor, the plate and description of Striatifolia could not have been delayed, as I had wished, for the purpose of re-examining the flower. It is totally distinct from the genus to which Belladonna belongs, and the circumstance of mule seedlings having been produced at Colvill's nursery from two species of Hippeastrum impregnated by its pollen, makes me very desirous of examining its seed more minutely, which I have not had in a perfect state lately, and ascertaining more exactly the particulars of its difference from that of Hippeastrum. The perfect conformity of the male part and corolla, might however be expected to favour the production, however rare, of a bigeneric mule.

The * denotes the several species in my collection.

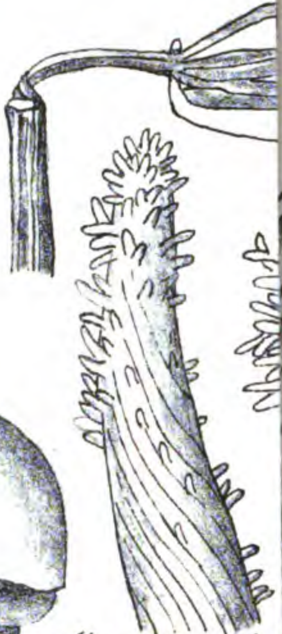

germ of Hymenocallis Litoralis. ovules erect.
Two cells shown.
P. Illyricum, anther's attachment
ovule greatly magnified. flat & smooth.
germ shewing one cell.
germs after the decay of the flower.
Pancratium
ovules shewing their attachments.
Illyricum.
stigma magnified
P. Illyricum
section corolla of Purpurea. broken off cease to
Anther of Vallota Purp: attached at one third from the bottom.
mass of ovules of Cr. Brousonetii, only two on one side appearing perfect. Probably polyspermous if perfect.
ovules of Cr. Petiolatum, alias Giganteum.
Ripe of Atama
mass of Cr. Canaliculatum with 3 ovules. cells 1 & 3 ovules.
one cell of Sprekelia with 24 ovules.
Crinum Riparium, germ, & peduncle; mass of ovules, 11, 12 or 14, natural size and magnified.
Am. Coranica anthers.
an ovule of a Sprekelia Form: magnified.
am. Coranica ovules
ovule magnified.
stigma magnified 2
ovules magnified.
Ammocharis Coranica
Pollen.
Pancratium Illyricum.
Hymenocallis Speciosa.
Hymenocallis Angusta.
Brodiphys Ambrinlensis.
Zephyran Tubispath
Ammocharis Coranica.
Crinum Capense.
Crinum Canaliculatum.
Crinum Scabrum
Hippeastrum Equestre.

W. Herbert saxo del.



Unripe seed of P. Amboinense cut open to shew the two fleshy integuments, and the attachment of the bulb which it had begun to emit.

Capsule of Crinum Erubescens ripe & burst, with the withered flower & persistent tube.

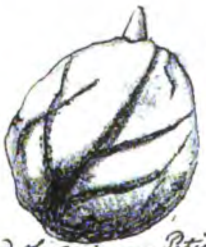


Magnified Stigm of Lycoris Aurea.

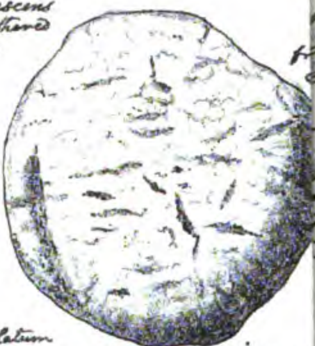
Monella Ochroleuca Burch. herb. Cyrtanthus

Monella Glauca. Burchell Cyrt. Collinus Bot. Reg.

m & tube of
ppeastrum Ful-
m showing the
tion of the filam.



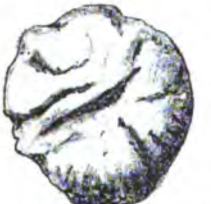
Seed of Crinum Petiolatum alias Giganteum, just sprouting.



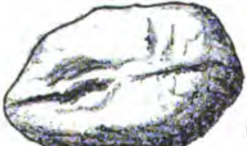
Seed of Crinum Cruentum

from a specimen. A. Flava Lamb. Herb.

Pyrolirion Flammeum tube & germen from a specimen. A. Flammea. Banks. Herb. A. Flamma Ruiz & Pavon.



Seed of Crinum Speciosum.



Seed of Crinum Defixum.

W. Herbert saxo del.

A TREATISE

&c.

AMARYLLIS.

Bulbus ovatus. *Folia* 14 vel ultra, hiemalia aut verna, æstate depereuntia. *Scapus* altus, præcox, autumnalis. *Umbella* sub-20-flora. *Flores* odori. *Pedunculi* divaricati. *Germen* trigonè sub-turbinatum aliàs obovatum, pedunculo directè continuatum. *Tubus* infundibuliformis, filamentis et membranâ filamenta jungente compactus, laciniis tubo adnatis, exterarum verò marginibus usque ad basin imbricantibus, ita ut laciniis exteris dereptis tubus integer maneat. *Limbus* patenter infundibuliformis. *Laciniæ* undulatæ, alternæ æquales. *Filamenta* casu recta vel assurgenter curvata, temere petalo exteriori vel interiori vel inter duo recumbentia, tria imâ parte crassiora laciniarum interiorum basi, tria breviora et tenuiora infra lacinias exteriores tubo adnata. *Stigma* trilobum superne fimbriatum. *Stylus* declinatus. *Capsula* trisulca, trilocularis, trivalvis. *Loculi* 6-14 ovulis. *Ovula* rotunda, duobus ordinibus posita. *Semina* magna, carnosa, globosa, nitida, capsulam crescendo rumpentia, colore margaritaceo parte solari purpurascentia. *Patria* Africa meridionalis. *Species.*

* 1. Belladonna. *Bot. Mag.* 733.
* 2. Pallida. *Redouté.* Vel Belladonna *var.* pallida.
* 3. Blanda. *Bot. Mag.* 1450.

Bulb egg-shaped. *Leaves* 14 or more, produced in the winter or spring, perishing in summer. *Scape* tall, autumnal, rising before the leaves. *Umbel* under 20-flowered. *Flowers* fragrant. *Peduncles* diverging variously. *Germ* nearly turbinate or inversely egg-shaped, but with three angles, continued straight from the peduncle. *Tube* funnel-shaped, formed by the filaments and a membrane which unites them, the petals adhering to the tube, but the margins of the outer petals over-lapping the tube, so that it remains entire when they are stripped off. *Limb* wide funnel-shaped. *Petals* undulated, alternately equal. *Filaments*, according to the posture of the flower, straight or bent upwards, lying at random upon an inner or an outer petal, or between two: three thicker than the others near the base attached to the base of the inner petals, three slenderer and shorter attached to the tube below the adhesion of the outer petals. *Stigma* 3-lobed, fringed on the top. *Style* a little bent. *Capsule* 3-furrowed, 3-celled, 3-valved. *Cells* with 6-14 ovules. *Ovules* round, in two rows. *Seeds* large, fleshy, round, smooth, bursting the capsule as they grow, pearl-coloured, becoming purple where exposed to the sun. *Country* S. Africa. *Species:* 1. Belladonna; 2. Pallida; 3. Blanda. *Culture.* These bulbs like a strong loam, and do not object to liquid manure from the farm-yard, and are hardy; but the severity of the winter in this country delays the growth of their leaves and injures their points; and the wetness of the summer, added to the lateness of their shoot, generally prevents them from going to rest early enough to produce their blossom in the autumn, in which case it is thrown out abortive in the spring. The easiest way of flowering them in this climate is to keep them in pots, which may be placed under a close glass frame in August till they flower, and afterwards plunged in the open border; or the pots may be kept in an airy greenhouse in the winter, and placed in the stove without water at Midsummer.

BRUNSVIGIA.

Bulbus ovatus aut rotundus. *Folia* 2-14 vel ultra, hiemalia æstate depereuntia. *Scapus* brevis, autumnalis, plerumque præcox. *Umbella* sub-80 flora. *Spatha* bifida, lata, brevis. *Pedunculi* divaricati. *Germen* trigonè turbinatum vel obovatum, pedunculi flexu declinatum. *Tubus* cylindraceo-sub-infundibuliformis, exterarum laciniarum marginibus summo tubo imbricantibus; (in B. Radulâ tubus sub-nullus sed margines imbricantes). *Laciniæ* non undulatæ, assurgenter curvatæ, alternæ sub-æquales. *Filamenta* sursum curvata, tria laciniarum basi, tria vix infra basin tubo adnata. *Stylus* sursum curvatus. *Stigma* obtusum, trigonum. *Capsula* recta, 3-sulca, 3-locularis, 3-valvis. *Loculi* ovulis paucis. (*Ovula* uno ordine alternatim conserta?) *Semina* parva, rotunda vel oblongo-ovata, integumento viridi non separabili; (parte solari purpurascentia?) *Patria* Africa meridionalis. *Species.*

Præcoces.

* 1. Multiflora. *Bot. Mag.* 1619.—Heist. Mon.
* –. var. rubricaulis, margine foliorum lævi. *A. Orientalis.* Jacq. H. Sc.
* 2. Josephinæ. *Redouté.*
–. var. minor. *Bot. Reg.* 192, 193. In Mr. Griffin's Collection.
*? 3. Striata. *Jacq. Hort. Sch.*—Specimen in Herb. Banks.
4. Radula. Ib. Specimen ib.

Foliis æstivis, flore tardivo.

* 5. Lucida. *Bot. Reg.* 497. A. Laticoma. *Bot. Mag.* 2124, *p.* 2. Nerine.

Bulb egg-shaped or round. *Leaves* 2 to 14 or more, growing in the winter, dying in the summer. *Scape* short, generally before the leaves, autumnal. *Umbel* under 80-flowered. *Spathe* 2-cleft, broad, short. *Peduncles* diverging variously. *Germ* triangular, turbinate or inversely ovate, declined by the bending of the peduncle. *Tube* between funnel-shaped and cylindrical, the margins of the outer petals over-lapping the upper part of it. (In B. Radula scarcely any tube, but the margins over-lapping.) *Petals* not undulated, bent upwards, the alternate nearly equal. *Filaments* bent upwards, three adhering to the base of the petal, three just below their base to the tube itself. *Style* bent upwards. *Stigma* obtuse, triangular. *Capsule* straight, 3-furrowed, 3-celled, 3-valved. *Cells* with few ovules. (*Ovules* alternately blended into one row?) *Seeds* few, round or oblong-ovate, with a green integument which is not separable (purpurascent by exposure to the sun?). *Country* S. Africa. *Species. Flowering before the leaves.* 1. Multiflora. 1 var. 2. Red-stemmed Multiflora. *Jacq.* 2 Josephinæ. 2 var. 2. Minor. 3. Striata. 4. Radula. *Species flowering with the leaves.* 5. Lucida. *Culture.* This genus is more delicate than Amaryllis. The bulbs rot more easily (unless, perhaps, that of Josephinæ) and require more decided drought after the decay of the leaves; and if the leaves were injured by frost, they would not push freely, as those of Amaryllis do afterwards. They should be kept quite dry in a warm situation under glass, when at rest before their autumnal blossoming, and plentifully watered and placed in an airy greenhouse while the leaves are growing in the winter. A good loam suits them, keeping the neck of the bulb above ground. Josephinæ, which has a great affinity to Amaryllis Blanda, will thrive in very strong soil. Lucida, which has a very different habit, requires to be left drier in the winter and its growth encouraged in the summer months: and it appears to prefer a sandy loam, *Observ.* Mr. Griffin has received with the bulb of Multiflora var. Rubricaulis, which is perhaps a distinct species, a fine specimen with about 70 capsules, which were full of seeds, mostly ripe and sprouting. In an unripe capsule I find about 14 ovules in a cell alternating from the two sides into one row. Those of Josephinæ Major are represented in the same posture by Mr. Burchell.

AMMOCHARIS.

Bulbus sphæricus vel ovatus. *Folia* hieme depereuntia, eadem vere repullulantia. *Scapus* æstivus. *Umbella* sub-40-flora. *Pedunculi* plùs minùs trigoni, divaricati. *Germen* trigonè turbinatum vel obovatum, pedunculo directè continuatum. *Tubus* trigonè cylindricus fauce ampliore, marginibus non imbricantibus, sex-costatus. *Laciniæ* non undulatæ, subpatentes apicibus reflexis, non assurgenter curvatis, alternæ subæquales. *Filamenta* patentia, secundum floris posituram recta aut vix curvata, pariter fere ad laciniarum basin tubo adnata, alterna subæqualia. *Stylus* eâdem ratione rectus aut vix curvus. *Antheræ* breves, mediâ fere parte filamentis affixæ. *Pollinis* vesiculæ Crini polline plùs dimidio minores. *Stigma* simplex. *Loculi* ovulis 6-16. *Ovula* biseriatim latere toto placentæ intermediæ adnata. *Semina* carnosa, integumento viridi non separabili (in Falcatâ quæ vidi difformia). *Patria* Africa meridionalis. *Species.*

* 1. Coranica. Bot. Reg. 139.

* 2. Falcata. Bot. Mag. 1443.

Bulb spherical or ovate. *Leaves* perishable in winter, but the same sprouting again in the spring. *Scape* rising before the leaves. *Umbel* under 40 flowered. *Peduncles* more or less triangular, diverging. *Germ* triangularly turbinate or obovate, continued straight from the peduncle. *Tube* triangularly cylindrical a little widened at the mouth, the margins of the petals not lapping over, six-ribbed. *Petals* not undulated, more or less widely expanded, with the points bent backwards but not curved upwards, the alternate nearly equal. *Filaments* spreading, straight or a little curved, according to the posture of the flower, adhering to the tube at the base of the petals nearly at the same point, the alternate of about equal lengths. *Style* in the same manner straight or a little curved. *Anthers* short, attached about the middle to the filaments. *Particles of pollen* not half so big as those of Crinum. *Stigma* undivided. *Cells* with from 8 to 16 ovules. *Ovules* in two rows, adhering by one whole side to the placenta lying between them. *Seeds* fleshy, with a green integument which is not separable (those which I have seen of Falcata, irregularly shaped). *Country* S. Africa. *Species.* 1. Coranica. 2. Falcata.—*Culture.* A moderately light loam will be found to suit the plants of this genus, the neck of the bulb being kept above ground. The very light soil in which they generally grow in Africa, would require such a frequent supply of water in the summer time, that it would be found inconvenient, and subject the plants to accidental checks. They should be left quite dry, and placed in a warm situation in the winter; well watered and removed into a cooler and airy place in summer. A hot-bed is sometimes used with success to promote their flowering. In Falcata I have found the cells from 6- to 8-seeded in two rows; in Coranica 15- or 16-seeded. The inspection of the germ of Coranica, sent to me by Mr. Burchell since the engraving was made of the germs of Toxicaria and Ciliaris, and the foregoing pages printed, has decided the separation of those two plants which I had intended to place as a 2d § of Ammocharis. The ovules of Coranica, like those of Crinum, adhere inseparably by one whole side to an intermediate body or placenta. Those of Toxicaria and Ciliaris are separately attached, closing from two threads, instead of diverging from an intermediate mass, which I consider a decisive generic feature. I have not examined the pollen of Falcata, nor its ovules since I have seen those of Coranica and Toxicaria; but I believe they will be found to accord with Coranica, to which the name Ammocharis is given. The germ of Coranica has the same angles as that of Falcata, but they are faintly marked, and on the peduncle become almost obsolete. I have never seen the ripe capsule of either: by the engraving in the Bot. Mag. that of Falcata appears not to open by valves as Brunsvigia, but to burst irregularly as Crinum.

BOOPHANE.

Bulbus oblongo-ovatus. *Folia* annua. *Scapus* præcox. *Umbella* 100-230-flora. *Pedunculi* trigoni, confertim suberecti, deim sphæricè divaricati. *Ovula* pauca, discreta, biseriatim alligata, uno ordine plerumque conserta. *Capsula* trigona, trisulca, trivalvis, trilocularis. Cætera ut in Ammocharide, nisi quòd corolla minor est. *Species.*

* 1. Toxicaria; loculis dispermis. *Bot. Mag.* 1217.
–. var. 2. Obtusifolia, magis undulata. *Burchell herb. et tab. pict.*
* 2. Ciliaris. *Jacq. fragm.* et *Specimen in herb. Banks.*

Bulb oblong-ovate. *Leaves* annual. *Scape* rising before them. *Umbel* from 100 to 230 flowered. *Peduncles* triangular, crowdedly sub-erect, afterwards diverging, so as to form a sphærical head. *Ovules* few, distinct, attached in two rows, closing usually into one. *Capsule* with three angles, three furrows, three valves, and three cells. In other respects like Ammocharis, excepting that the coroll is smaller and the stigma more acute. *Species.* * 1. Toxicaria; with 2-seeded cells. 1. var. 2, blunt-leaved, more undulated. * 2. Ciliaris.—*Culture, &c.* The same soil suits Boophane and Ammocharis. Ciliaris is sometimes found in clay in Africa, as well as many sorts of Mesembryanthema, but the evaporation in England is not sufficiently rapid to permit them to thrive in a strong soil with us. It may even be well to place some sharp white sand in contact with the bulb of Ciliaris, which is most liable to rot. Toxicaria will continue growing during the winter in the stove, but without a period of rest I do not think it will flower. Ciliaris seems to prefer pushing its leaves in autumn, and resting, like Amaryllis, in the summer, at which time it should be kept dry, but not too hot, which would cause the bulb to bleed. Bulbs of this and other genera allied to it are often destroyed by the fear of giving as much water as they require while growing, or leaving them as dry as they ought to be when at rest; and the bulbs are annoyed by irregular and capricious watering till they perish. *Observ.* The cells of Toxicaria appear to be regularly 2-seeded, the ovules sometimes one above the other, sometimes jostling.

IMHOFIA.

Bulbus, folia, spatha, ut in Brunsvigiâ. *Scapus* sub-præcox, sub-20-flora. *Pedunculi* suberecti. *Germen* triloculare, trigonè obovatum, pedunculo continuatum. *Flores* fœtidi. *Tubus* brevis, rectus. *Limbus* subundulatus, patentissimè reflexus ut in Nerine. *Filamenta* erecta, fasciculata. *Stigma* obtusum, trigonum. *Stylus* rectus. *Species.* Marginata. *Specim.* in *Herb. Lambert.—Jacq. Hort. Schœnb. Amaryllis Marginata.*

Bulb, leaves, and *spathe* as in Brunsvigia. *Scape* a little before the leaves, less than 20-flowered. *Peduncles* straight and nearly erect. *Germ* 3-celled, obovate, continued from the peduncles. *Flowers* fetid. *Tube* short, straight. Limb rather undulated, wide-spread, with points bent back as in Nerine. *Filaments* erect, clinging round the style. *Stigma* triangular, obtuse. *Style* erect.—Only known by the figure and description of Jacquin, and a specimen in Mr. Lambert's herbarium. *Species.* 1. Marginata.

NERINE.

Bulbus sub-rotundus. *Folia* bifaria, angusta, hiemalia, æstate depereuntia. *Scapus* altus, sub-præcox, autumnalis. *Umbella* sub-20-flora. *Flores* inodori. *Pedunculi* sub-erectè divaricati. *Germen* breve, rotundatè trigonum, pedunculo directè continuatum, aut ovulis in loculo superiore

turgescentibus deflexum unde flos difformior, 3-loculare, loculis 2-14 spermis. *Corollæ* tubus nullus, laciniæ sub-æquales, undulatæ, angustæ, patentes, usque ad germen divisæ, basis medio infra filamentorum junctionem eis adhærentia. *Filamenta* versùs basin latiora, gibbosa, et in nectarium liquore sæpe repletum coalescentia; alterna longiora, nisi casu irregularia; breviora corollæ laciniis exterioribus adhærentia. *Stigma* trifidum, superne fimbriatum. *Capsula* trilocularis, trisulca, trivalvis, difformis plerumque et seminibus immaturis disrupta. *Semina* parva, integumento viridi non separabili, compressione angularia, parte exteriore rotundata, et aliquando sub-purpurascentia. *Patria* Africa meridionalis.

SECTIO 1. REGULARES.

Germine recto; *corollâ* patente; *filamentis et stylo* fasciculatis, rectioribus. *Species.*

1. *Curvifolia. *Bot. Mag.* 725.
2. *Corusca. *Bot. Mag.* 1089.
3. *Rosea. *Bot. Mag.* 2124.
4. *Venusta. *Bot. Mag.* 1090.
   * ——— var. 2. minor.
5. *Sarniensis, alias Venusta, var. 3. *Bot. Mag.* 294.

SECTIO 2. DISTORTÆ.

Germine deflexo; *corollâ filamentis et stylo* sursum curvatis. *Species.*

* 6. Flexuosa. *Bot. Reg.* 172.
* 7. Humilis. *Bot. Mag.* 726.
* 8. Undulata. *Bot. Mag.* 369.
* 9. Pulchella. foliis glaucis. *Sp. inedita.*

Bulb roundish. *Leaves* bifarious, narrow, flourishing in winter, dying in summer. *Scape* tall, just before the leaves in autumn. *Flowers* scentless. *Peduncles* divaricating, with a tendency to be erect. *Germ* short, triangularly rounded, continued straight from the peduncles, or bent downwards by the swelling of the ovules in the upper cell, by which the flower is distorted, with 3 cells, which contain from 2 to 14 ovules. No *tube*. *Petals* nearly equal, undulated, narrow, wide-spread, divided quite to the germ, adhering at bottom by the mid-rib to the united filaments below the point of their union. *Filaments* widened and gibbous near the base, coalescing into a nectary often filled with liquor: the alternate longer, unless irregular by accident; the shorter adhering to the outer petals. *Stigma* trifid, fringed on the top. *Capsule* 3-celled, 3-furrowed, 3-valved, generally irregular in its form, and burst by the swelling of the seeds. *Seeds* small, with a green integument which is not separable, smooth, angular by compression, rounded, sometimes purplish on the back. *Country* S. Africa. Section 1st, with regular flowers: 1. Curvifolia; 2. Corusca; 3. Rosea; 4. Venusta, and do. var. minor; 5. Sarniensis, or Venusta, var. 3. Section second, with distorted flowers: 6. Flexuosa; 7. Humilis; 8. Undulata; 9. Pulchella, with glaucous leaves. *Culture.* The cultivation of this genus has been fully detailed in the Hort. Trans. v. 4, p. 176. They should be potted in light loam, with the necks of the bulbs above ground. The growth of the leaves should be promoted early in the autumn, and while the leaves are growing the pots should be placed in an airy situation and freely watered. They must be sheltered from frost during the winter, with a moderate supply of water, sufficient to prevent the leaves from suffering by drought before the period of rest. From Midsummer till the time of flowering, about the end of August or a little later, they should be kept quite dry, and during that time the bulbs may be examined, the decayed coats and any rotten part of the bulbs removed, and the offsets taken off. In some situations Nerine Undulata flowers pretty well out of doors, but in England the summers are generally too wet to give the proper rest to bulbs of this genus, and the frost too severe to permit their leaves to flourish in due season. The bulbs of this and the foregoing genera, as well as the stemless species of Hæmanthus, require free air and a low temperature whilst in leaf, and may be removed into a warmer place while the bulbs are at rest. It is their natural habit to vegetate in a declining temperature, and I have seen the growth of the leaves of Am. Blanda and Br. Multiflora checked instead of promoted by the heat of the stove. Under the treatment recommended, Br. Multiflora produced in my greenhouse last winter six leaves nearly seven inches wide, which split the bulb by their vigorous growth; and a newly-imported bulb of Josephinæ fourteen leaves. *Observ.* It is certainly possible that one species of a genus which is otherwise local may be found also indigenous in a remote and insulated quarter of the globe, but it is very improbable; and I am confirmed in the suspicion that Thunberg confounded Nerine Sarniensis with Lycoris Radiata, by a specimen of Radiata from Japan, in Mr. Lambert's herbarium.

LYCORIS.

Bulbus ovatus. *Folia* bifaria, angusta, hiemalia, æstate depereuntia. *Scapus* sub-præcox, autumnalis. *Umbella* sub-12-flora? *Flores* inodori. *Pedunculi* suberectè divaricati. *Germen* trigonè ovale, ferè rectum, 3-loculare. *Loculi* 6-8 spermi, ovulis subglobosis. *Tubus* obsoletè trigonus, a germine sub-declinatus, sursum curvatus, et juxta faucem amplior. *Laciniæ* semi-patentes, sursum curvatæ, undulatæ. *Filamenta* pariter ferè cum laciniis in tubum coalescentia, assurgenter curvata, alterna longiora. *Stylus* sursum curvatus. *Stigma* simplex, acutum, circum-fimbriatum. *Capsula et semina* non visa. *Patria* Asiæ pars orientalis. *Species.*

* 1. Aurea. *Bot. Mag.* 409.
* 2. Radiata. *Bot. Rep.* 95.—*Specimen ex Japoniâ in herb. Lamb.*

Bulb ovate. *Leaves* narrow, bifarious, flourishing in winter, dying in the summer. *Scape* autumnal, a little before or with the leaves. *Umbel* probably under 12-flowered. *Flowers* scentless. *Peduncles* erect or sloping. *Germen* triangularly oval, very little bent downwards, 3-celled. *Cells* with 6-8 ovules, roundish. *Tube* obsoletely triangular, very little bent from the germ, curved upwards, a little widened at the mouth. *Petals* half expanded, curved upwards, undulated. *Filaments* inserted almost equally and coalescing at one height with the petals into a tube, the alternate longest. *Style* curved upwards. *Stigma* simple, acute, fringed round the sides. *Capsule and seeds* not seen. *Country* the Eastern part of Asia. *Species:* 1. Aurea, 2. Radiata. *Culture.* A light loam appears to suit them. Bulbs of L. Aurea have been left by me one or two winters in the open ground without perishing, but they did not vegetate. They should be kept dry in the stove in the summer, and ought to flower in the autumn. The growth of the leaves should be promoted by a moderate supply of water in the autumn. They are pretty hardy, and may in the spring be removed into the greenhouse; but they must be kept dry and warm in summer. L. Radiata does not flower near so freely with us, though I understand that it blooms abundantly at Calcutta about the beginning of August, though neither Aurea nor Radiata ripen their seed in Bengal. I apprehend that a very hot season of rest, and the vigorous growth of the leaf in a lower temperature, are the requisites. The general fault in the treatment of tender bulbs is, that we keep them in too uniform a temperature, either always in the greenhouse or always in the stove, and perhaps water them a little at all seasons, instead of abstaining entirely during part of the year while they are preparing their bloom, and allowing them a wet and cool season for the growth of their leaves.

GRIFFINIA.

Foliis petiolatis, filamento superiore sejuncto, loculis dispermis, a Lycoride discreta; seminibus procul-dubio accuratiùs distinguenda, quæ in Lycoride matura non vidi. Flores Griffiniæ non vidi, de quibus et semine Griffiniæ consulas *Bot. Reg.* 511, et v. 6 appendicem. "Semina obovata nitentia, ochroleuca, integumento duplici, albumine densè carnoso, radiculæ apice exserto." *Patria* America meridionalis. *Species.*

* 1. Hyacinthina. *Bot. Reg.*
2. Parviflora. *Bot. Reg.*

Separated from Lycoris by petiolated leaves, the upper filament detached, and 2-seeded cells, doubtless more widely distinguishable by the seed; but I have never seen ripe seed of Lycoris, nor met with any description of it. I have had no opportunity of examining the flowers of Griffinia, concerning which as well as its seeds, see Bot. Reg. 511, and v. 6 Appendix: "Seeds obovate, shining, yellowish white, with two integuments, and thick fleshy albumen within, the point of the radicle prominent." *Country* S. America. *Culture.* Requires the stove, and does not appear to be of difficult culture; but I have not possessed it long. It should have rest in the winter.

CRINUM.

Bulbus columnaris, vel sphæricus. *Folia* multifaria (nisi in C. Disticho), in columnaribus perennia, in sphæricis sæpe decidua. *Umbella* 1-60-flora. *Germen* mediâ parte crassius, ovale vel trigonè ovale, triloculare, loculis 1-31 spermis, sessile vel pedunculo directè continuatum. *Tubus* trigonè cylindricus, germine directè continuatus eoque gracilior, limbo sæpe longior, emarcescente limbo sæpe magnâ parte persistens. *Laciniæ* alternæ subæquales, internæ plerumque latiores. *Limbus* patens vel semipatens, ante expansionem inclinatus vel nutans. *Filamenta* extra faucem tubi inserta; alterna vix profundiùs et marginibus laciniarum interiorum puncto insertionis adnata; plùs minùs patentia vel declinata, apice plùs minùs plerumque assurgenter curvato. *Stylus* gracilis, apicem versùs vix tenuior. *Stigma* obtusum, trigonum, vel trilobatum. *Capsula* dissepimentorum destructione 1-2 locularis, sæpe difformis, valvis nullis vel obsoletis, seminibus temere disrupta. *Ovula* in polyspermis vix discreta, sed massæ cuidam non separabili in medio positæ adhærentia, apicibus versùs dissepimenta tendentibus. *Semina* carnosa, integumento viridi non separabili, sæpius magna, difformia. *Incolunt* orbem universum inter et prope tropicos.

SECTIO 1. PATENTES.

Subdivisio 1. NUTANTES; limbo ante expansionem nutante. Quoad vidi, tubo curvatiore, columnares vel sphæricæ, filamentorum basi gibbosâ vel lævi, sessiles vel subsessiles et loculis 2-4-polyspermis, nisi in C. Declinato; foliis in sphæricis vix undulatis.

* 1. Erubescens, var. Rubrilimba. *Bot. Mag.* 1232.
* –, var. 2. Major, limbo albo, tubo et germine rubro punctatis.
* –. var. 3. Minor, limbo albo, tubo et germine viridioribus.
* –. var. 4. Viridifolia, margine et basi foliorum viridiore. *Ex Demerarâ.* Griffin.
* –. var. 5. Berbicensis, foliis viridibus, sparsioribus; limbo, ut fertur, subrubescente. *Ex Berbice.* Lee. Forsan species diversa.
* 2. Cruentum. *Bot. Mag.* 171.
* 3. Amabile. *Bot. Mag.* 1605. foliis acutis. Superbum. *Roxb.*
* 4. Brachyandrum. *Bot. Mag.* 2231, *p.* 2. in spec. enum.

* 5. Declinatum. *Bot. Mag.* 2231. Monospermum, pedunculatum.
* 6. Defixum. *Bot. Mag.* 2208.
* 7. Ensifolium. mox in *Bot. Mag.*
* 8. Americanum. *Bot. Mag.* 1034.
9. Amœnum, margine foliorum subscabro. *Ex Ceylon.* Griffin.
* –. var. 2. Margine lævi. *Ex Bengal.*
* –. var. 3. Angustifolia, altior. *Ex Rangoon.* Carey. *Ex Ceylon.* Griffin.

Huic subdivisioni forsan referendæ.

* 10. Augustum, Sp. Amabili affinis, foliis obtusis.
11. Venustum. *Carey.* 35-flora, C. Longifolio quoad flores similis; C. Erubescentis magnitudine.
* 12. Mauritianum. *Loddiges.—Bot. Mag.* 2180, *p.* 2.
* 13. Longifolium. *Roxb. tab. depict.*
* 14. Lorifolium. *Roxb.*
*?15. Commelini. *Jacquin Hort. Schœnb.* Spec. Defixo simillima.
* 16. Canalifolium. *Carey.* Bulbo rotundo, foliis canaliculatis, margine scabro, limbo subrubescente.
17. Verecundum. *Carey.* Foliis Amœno similis, floribus dispar.
18. Erythrophyllum. *Carey.* Spec. ex Pegu, foliis sanguineis.
* 19. Elegans. *Carey.* Ex Pegu, 'bulbo ovato semi-columnari; floribus magnis, albis. C. Erubescentis magnitudine.

Subdivisio 2. INCLINATÆ; limbo ante expansionem inclinato. Quoad vidi, tubo rectiore, columnares, pedunculatæ, filamentorum basi gibbosâ, foliis sub-undulatis.

* 20. Toxicarium. *Bot. Mag.* 1073. Varietates sunt vix notâ dignæ.
* 21. Brevifolium. *Bot. Reg.* 179. Bracteatum.
* —. var. Angustifolia foliis minùs undulatis.
* 22. Pedunculatum. *Bot. Reg.* 52. Australe *hortulanorum.*
* 23. Exaltatum. Pedunculato affinis germine et pedunculo gracilibus.
* 24. Canaliculatum. Pedunculato humilior, tubo breviore, limbo majore.
* 25. Anomalum. *Bot. Mag.* in spec. enum. 2121.5.—In tab. depict. ex Chinâ apud Soc. Hortic. foliis plicatis.

Huic subdivisioni forsan referendæ.

* 26. Procerum. *Carey.* Species maxima ex Pegu limbo pallidissimè subrubescente.
* 27. Sinicum. *Carey.* Limbo pallidissimè ochroleuco.
* 28. Sumatranum. *Roxb.* margine foliorum scabro.
29. Brevilimbum. *Carey.* *Bot. Mag.* in spec. enum. 2121.7. Insularum in Pacifico forsan incola.
30. Macrocarpon. *Carey.* Ex Pegu. *Bot. Mag.* spec. enum. 2231. p. 2.
31. Angustifolium. *Brown prod.*
32. Venosum. *Brown prod.*

SECTIO 2. SEMIPATENTES.

Subdivisio 1. ORNATÆ; ante expansionem nutantes. Quoad novi, tubo curvatiore, persistente vel unà cum corollâ marcescente, tropicæ, bulbo sphærico, foliis sæpius undulatis, germine sessili, loculis 2-polyspermis, filamentis magis declinatis et fasciculatis.

* 1. Broussoneti. *Bot. Mag.* 2121. Am. Ornata. *Banks. Herb.*
* 2. Yuccæides. *Bot. Mag.* spec. enum. 2121.6. *Banks. Herb.* Am.
* 3. Distichum. *Bot. Mag.* Am. Ornata 1253.
* 4. Petiolatum. *Bot. Mag.* 923. Giganteum. *Andrews's Bot. Rep.*
* 5. Scabrum. *Bot. Mag.* 2180.

* 6. Zeylanicum. *Bot. Mag.* 1171. Am. Ornata.
* 7. Latifolium. *Bot. Mag.* spec. enum. 2121.6.
* 8. Speciosum. *Bot. Mag.* 2217.
* 9. Moluccanum. *Bot. Mag.* spec. enum. 2121.6.

Huic subdivisioni forsan referenda.

* 10. Formosum †. Sp. nondum apud nos florida, ex Braziliâ, bulbo ovato; foliis latis, crassis, nitentibus, vix undulatis, basi purpurascente.

Subdivisio 2. LONGIFOLIÆ; ante expansionem inclinatæ. Quoad novi, tubo flaccidiore, foliis non undulatis, pedunculatæ, loculis polyspermis, tubo marcescente, extrâ-tropicæ, forsan etiam tropicæ.

* 11. Flaccidum. *Bot. Mag.* 2133. *Bot. Reg.* 426. A. Australasica.
* 12. Capense. *Bot. Mag.* 631. Germine longo, ovulis 27-31, stigmate integro. A. Longifolia.
* 13. Riparium. *Bot. Reg.* 546. Germine brevi, ovulis 11-14, stigmate trilobato.
* 14. Crassifolium.—Capense, var. Viridifolia. *Bot. Mag.* spec. enum. 2121.
* 15. Revolutum. *Hort. Kew. Bauer tab. depict. Burchell herb. et tab. depict.*
* 16. Aquaticum. *Burchell herb.* Campanulatum. *Bot. Mag.* spec. enum.
* 17. Longiflorum. *Bot. Reg.* 303. filamentis gibbosis.

Bulb columnar or sphærical. *Leaves* multifarious (unless in C. Distichum), perennial in the columnar, often perishable in the sphærical. *Umbell* from 1 to 60 flowered. *Germ* thickest near the middle, oval or triangularly oval, 3-celled, with from 1 to 31 ovules in each cell, sessile or continued in a straight direction by a peduncle. *Tube* triangularly cylindrical, continued from and slenderer than the germ, often more or less persistent after the limb is withered. The alternate petals nearly equal, the internal generally widest. *Limb* widely expanded, or half expanded, before expansion inclined, or nodding. *Filaments* inserted without the tube; the alternate a very little deeper and adhering at the point of insertion to the margins of the inner petals; more or less either spreading or declined, with the points generally more or less bent upwards. *Style* slender, a very little slenderer towards the point. *Stigma* obtuse, triangular, or 3-lobed. *Capsule* by the decay of the interior partitions becoming 1 or 2-celled, often deformed, burst by the seeds in the part which happens to be most ripe, having no valves, or, if any, not serviceable. *Ovules* ‡ in the many-seeded sorts not detached, but adhering to an intermediate mass, of which they appear to form a crenated margin; their points being turned sideways towards the partitions of the cell. *Seeds* fleshy, with a green inseparable integument, often large and deformed. *Scape* solid. *Inhabit* the whole belt of the world within and near the tropics.

Section first. Patentes, with wide-spreading coroll. *First subdivision. Nutantes,* with the limb nodding before its expansion. As far as I have seen, tropical, the tube more bent, bulb columnar or sphærical, the base of the filaments either gibbous or even, sessile or subsessile, with cells 2-4 or many-seeded, except C. Declinatum; leaves in the sphærical species scarcely, if at all, undulated. *Species.* * 1. Erubescens, var. Rubrilimba, with pink petals. *Bot. Mag.* 1232.—* –. var. 2. Major. White petals, tube and germen speckled with red.—* –. var. 3. Minor. White petals, tube and germen greener.—* –. var. 4. Viridifolia, from Demarara. *Mr. Griffin.* Edge and base of the leaves greener.—* –. var. 5. Berbicensis. Leaves green, spread more diversely; petals said to be pink. *Mr. Lee.*—* 2. Cruentum. *Bot. Reg.* 171.—* 3. Amabile. *Bot. Mag.* 1605.—* 4. Brachyandrum. *Bot. Mag.* spec. enum. 2231, p. 2.—* 5. Defixum. *Bot. Mag.* 2208.—* 6. Ensifolium.—* 7. Americanum. *Bot. Mag.* 1034.—8. Amœnum, with edge of the leaves a little rough, from Ceylon. *Mr. Griffin.*—* var. 2, with the margin smooth, from the north of Bengal. This variety may be seen at Mr. Kent's, at Lord Carnarvon's, and at Liverpool; and a bulb very like it, if distinct, at Mr. Cattley's, imported by Whittley and Co.—* var. 3, with the leaves narrower and taller; from Rangoon, *Dr. Carey*; from Ceylon, *Mr. Griffin.*

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† It will be understood, that the chief feature of the subdivisions of two sections is the nodding or inclination of the bud: that I have subjoined other particulars which appear to coincide with that character in each section, as far as I have seen, but which I scarcely expect to find invariable.

‡ This point alone would be sufficient to establish the genus. In Hippeastrum, Zephyranthes, &c. the ovules are detached, the two rows in contact with each other, if not actually interlapping, and as they grow they press against each other, and against the valve in the outer coat of the cell; in some genera bursting the valve, in others distending the capsule into lobes. In Crinum the ovules, being separated from the other row in the same cell and diverging, press by their growth against the lateral partition, which they break down, and tend to intermingle with those in the adjoining cell.

Perhaps belonging to this subdivision. * 9. Augustum, nearly allied to Amabile, with blunter leaves. I believe Lord Carnarvon's and mine to be the only bulbs of this species in England. Loddiges's great plant, and those sent from Sumatra by Sir S. Raffles, have the leaf of Amabile.—10. Venustum. *Carey.* 35-flowered, of the size of C. Erubescens, with flowers like those of C. Longifolium.—* 11. Mauritianum. *Loddiges.*—* 12. Longifolium. —* 13. Lorifolium.—* 14. Commelini. *Jacquin Hort. Schœnb.* Closely allied to C. Defixum.—* 15. Canalifolium. *Carey.* With a round reddish bulb, leaves deeply channelled, rough margin, and pinkish petals.—16. Verecundum. *Carey.* Like Amœnum in foliage, differing in the flowers.—17. Erythrophyllum. *Carey.* From Pegu, about the size of Longifolium, with blood-red leaves.—* 18. Elegans. *Carey.* From Pegu, with a purplish ovate bulb almost columnar, and large white flowers; leaves broader, blunter, and more erect than Lorifolium.

Second subdivision. Inclinatæ; the limb only inclined before expansion. As far as I have seen, with the tube straighter, bulb columnar, pedunculated, with the base of the filaments gibbous, and the leaves rather undulated. * 19. Toxicarium. *Bot. Mag.* 1073. Of this species there are varieties scarcely worth noticing, as well as of Brevifolium, and the two species approximate to each other.—* 20. Brevifolium. *Bot. Reg.* 179. under the name of Bracteatum, but it is not more bracteated than many other species. * Var. 2, with leaves narrower and less undulated.—* 22. Pedunculatum. *Bot. Reg.* 52. Called by nurserymen Australe.—* 23. Exaltatum. Allied to Pedunculatum, with the germ and tube slenderer.—* 24. Canaliculatum. A shorter plant than Pedunculatum, with the tube shorter and the limb longer.—* 25. Anomalum. *Bot. Mag.* spec. enum. 2121-5. A drawing from China belonging to the Hortic. Soc. with plicate leaves.

Perhaps belonging to this subdivision. * 26. Procerum. *Carey.* A species of the first magnitude from Pegu; flowers with a tendency to red.—* 27. Sinicum. *Carey.* Petals pale yellowish white.—* 28. Sumatranum. *Roxb.*; with the margins of the leaves rough.—29. Brevilimbum. *Carey.* A singular species, with the petals short like a Primrose. Brevilimbum and Brachyandrum were raised by Dr. Carey from seed sent to him from Sidney in New Holland; but it is most probable that those two, as well as Exaltatum and Canaliculatum, are natives of Otaheite, or some other island in the Pacific.—30. Macrocarpon. *Carey.* From Rangoon, with long stiff leaves 2 inches wide, petals white, broader than Toxicarium.—31. Angustifolium. N. Holl. *Brown Prod.*—32. Venosum. N. Holl. *Brown Prod.*

Second Section. Semipatentes, half-expanded. *First subdivision. Ornatæ;* nodding before expansion. As far as I know, with the tube more curved, persistent or perishing with the limb, tropical, bulb sphærical, leaves generally undulated, sessile germ, from 2- to many-seeded cells, and filaments more fasciculate and declined. * 1. Broussoneti. *Bot. Mag.* 2121.—* 2. Yuccæides. *Bot. Mag.* spec. enum. 2121-6. *Banks. herb.*—* 3. Distichum. *Bot. Mag.* 1253.—* 4. Petiolatum. *Bot. Mag.* 923. Giganteum. *In spec. enum.* The name Giganteum is absurdly misapplied to this species, which is of inferior stature, but distinguishable from all others by its petiolated leaves.—* 5. Scabrum. *Bot. Mag.* 2180.—* 6. Zeylanicum. *Bot. Mag.* 1171.—* 7. Latifolium. *Bot. Mag.* spec. enum. 2121-6. Closely allied to Zeylanicum, but easily distinguishable by a rougher margin and the absence of the red tip to the leaf. I believe mine to be the only true bulb of this species in England.—* 8. Speciosum. *Bot. Mag.* 2217.—* 9. Moluccanum. *Bot. Mag.* spec. enum. 2121, p. 6.

To this subdivision probably belongs an unrecorded species from Brazil, which I call C. Formosum, with an ovate bulb, purplish at the neck, leaves very thick and fleshy, glossy green, acute, from two to three inches wide, not undulate, with a nearly smooth margin.

Second subdivision. Longifoliæ; inclining before expansion. As far as I know, with the tube weaker and perishable, leaves not undulated, and cells many-seeded; sphærical, pedunculated, growing without the tropics, perhaps also within. * 11. Flaccidum. *Bot. Mag.* 2133. *Bot. Reg.* 426.—* 12. Capense; with obtuse stigma, long germ, from 27 to 31 ovules.—* 13. Riparium; with three-lobed stigma, short germ, from 11 to 14 ovules. *Bot. Reg.* 546. Capense, var. Riparia.—* 14. Crassifolium. *Bot. Mag.* spec. enum. 2121. Capense, var. Viridifolia, but stated there to be probably a distinct species. Its leaves are much thicker, and it will not live, like Capense, in water.—*15. Revolutum. *Hort. Kew. Bauer's* drawing in the Banks. Lib. *Burchell's* drawing and herbarium.—* 16. Aquaticum. *Burchell's herbarium.* Campanulatum. *Bot. Mag.* spec. enum. found by Mr. Burchell growing in a pond in S. Africa.—* 17. Longiflorum. *Bot. Reg.* 303. with gibbous filaments; native country not known.

The tube is usually straighter in the last subdivision, but it will be found very much curved in some engravings (see C. Riparium, *Bot. Reg.* 546); in these species it is perishable, and would have been found straighter when the flower was in perfection; it weeps when it is tending to decay, and in a high temperature before expansion, bending near the germ.

Culture. Most of the plants of this genus being inhabitants of hot countries, require the stove, and a liberal supply of water during the summer months; but the quantity of moisture should always be lessened in the winter. Of the first section, however, those with columnar stems will not object to plentiful watering at all times, as the habit of their leaves is more decidedly perennial. The whole of the column should be kept above ground, and all the obsolete coats, which are the base of decayed leaves, should be gradually stripped away, leaving the bulbous stem smooth and clean. The growth and vigour of the whole genus is promoted by placing the pots upon moist sand; and the young bulbs thrive fast upon a tin tray placed upon a warm flue and nearly filled with sand, which may be frequently inundated, especially when the sun is hot, but should not be constantly flooded. C. Toxicarium and Brevifolium require a lighter loam than Pedunculatum, and although they will suffer much from want of water in summer, they do not like to stand in water.

Amongst the sphærical bulbs, § 1. *subd.* 2. C. Defixum may be entirely plunged in water in the summer, for a short time, to flower it, but the fibres will rot if kept too long in that situation, and very little water is necessary for it in the winter. C. Ensifolium is still more liable to suffer from much wet at that season. C. Lorifolium and Longifolium are so like in leaf that they can scarcely be distinguished. The former shows a little purple on the bulb; in the latter it is yellower. They are said to differ widely in the inflorescence, but have not yet flowered in England. I suspect that they should be left nearly dry in the winter, and plentifully watered and shaded in a hotbed in the summer. C. Commelini of Jacquin is unknown in this country, and appears very closely allied to Defixum, though described as an American species. I believe I have the plant, lately imported from Brazil. The bulbs of § 2, *subd.* 1, Ornatæ, with the exception of Petiolatum, may be left in a dormant state in the winter, especially Broussoneti, Yuccæides, Distichum, and Moluccanum. I believe the better mode of treating the others is to give them just moisture enough, by letting them stand on the sand, to prevent their fibres becoming very dry for a long time, or their leaves entirely decaying, and to start them with a more abundant supply in the spring. Whenever the youngest leaves of any Crinum with a sphærical bulb turn yellow and decay, the bulb should immediately be allowed to go to rest for a short time, the cause appearing generally to have been too much moisture in too low a temperature. The five first species of this section have the coroll more cup-shaped, and are natives of the coast of Africa, unless Scabrum be a native of Brazil, from whence it has been imported into this country. No Crinum, however, of this section has yet been found to be a native of America, and Scabrum has probably been taken there from Africa, as well as Broussoneti and Petiolatum, which are naturalized in the neighbourhood of Rio Janeiro. The East Indian sorts appear to have a more funnel-shaped coroll, liker in form to Capense. The plants of the 2*d subd.* of this section are chiefly greenhouse plants. The leaves of Crinum Flaccidum appear, however, to suffer quickly from frost in the greenhouse; and as it is apt to flower in autumn, and even in winter, I keep it in the stove at those seasons, and I have not yet bulbs enough of this species to try whether it will live out of doors. Capense, planted a foot deep in the border, and well watered in the summer, is a hardy plant; and I find the mule C. Govenium (*Hort. Trans.*) aliàs Zeylanico-Capense, and Erubescente-Capense, equally hardy. They survived last winter without protection, and pushed vigorously in the spring, notwithstanding frosty nights and snow. I apprehend that all the mules will prove as hardy as the female parent. C. Revolutum is the most difficult plant to manage of the whole genus, and the bulbs are very apt to perish. They require the most perfect drought in winter. If forced at that season they will bleed and decay. They will not thrive if they are raised much above ground and exposed to the action of the sun; or if wet insinuates itself within the outer coats. A moderately light loam appears to suit them, free air, and plenty of water in summer; the neck of the bulb being just above ground. At the approach of winter turn the pot on its side, and leave it perfectly dry. When the plant has completely ceased to vegetate, shake the earth carefully from its ball, pull off the decayed coats without making the bulb bleed, and wipe it very dry. If it seems mouldy, pour dry sand over it, and after a short time let it be wiped again; after which it may be repotted in dry pulverized loam, and left without a drop of water till the spring. Its flowers are very like those of Capense, but stand on shorter peduncles; the tube is of variable length, but not always shorter than the limb, as it has been described. The name was given on account of the curling of the tips of the petals. The plant which I call C. Revolutum is the A. Revoluta of the Hort. Kew. of which there is a drawing by Bauer in the Banksian Library. The description of it in the note, p. 917, Bot. Mag. is pretty accurate, and the figure 915 was probably made from a plant of that species, though extremely incorrect, the petals being too deeply divided, and the tube, which should have been long and slender, represented as funnel-shaped. In Mr. Burchell's drawing the tube is longer than the limb, and the native specimens in his Herbarium are very like C. Capense, though the bulb and leaves (as well as the habit of the plant) are very different, and exactly correspond with Bauer's drawing. Mr. Wykes, gardener to Mr. Woodford, showed me, the day before the sale at Springwell, the plant from which he assured me he was certain the figure 1178, Bot. Mag. had been made, and it was evidently the Common glaucous C. Capense. I should have bought it, if I had thought the point at all doubtful. The editor of the Bot. Reg. has lately stated that Mr. Woodford's bulb, or an offset from it, is now in Mr. Griffin's collection; but on inquiry, I learn from Mr. Griffin, that he disclaims all knowledge of it. The leaf which accompanies Jacquin's A. Variabilis is more like that of Capense than Revolutum, and there certainly exists no figure of Revolutum at all like the plant. C. Longiflorum, if it be a natural species, is a very singular plant, furnishing a link between two which are very remote, Erubescens and Capense. Its leaves, which are very like the mules between those two species, have grown in my stove eight or nine feet long, though it has not flowered there. I suspect that it would prefer a lower temperature and perhaps prove to be hardy. Capense will rarely flower, if kept the whole year in the stove, and I believe the mules from it will retain the same habit. A bulb of C. Aquaticum, brought to England by Mr. Burchell, has produced abundance of offsets in his collection, but has not flowered. The specimen in his herbarium shows a flower smaller and more campanulate than that of Capense: it is probably equally hardy. The leaves are rather more succulent. Of the doubtful species enumerated in the Bot. Mag. 2121, Umbellatum, *Carey*, proved to be the narrow-leaved Amœnum, Undulæfolium to be Scabrum, Floridanum to be Toxicarium, and 44-5-6-7, *Carey*, to be Pedunculatum and Canaliculatum. Mr. Griffin has bulbs from Ceylon in appearance much like the Bengal Speciosum, and they will probably prove to be of that species. Dr. Carey informs me that he has an unrecorded species of the Ornatæ from Mauritius, and I have two other species or varieties which have not yet flowered, one of which is an offset from a bulb sent to the Liverpool Garden from Ceylon. A bulb of Moluccanum, planted out of doors against the front wall of the stove, survived the last winter; and it remains yet to ascertain how hardy the sphærical bulbs may prove, and in how low a temperature they may be induced to flower. Toxicarium, planted out, turned yellow very early in the autumn, and appeared to be very tender. I do not think any Crinum likes to remain always under water, and probably the pond in which C. Aquaticum was found may be dry at some season. C. Capense flowered again after standing two winters in the pond, but weaker; and the bulbs seem to bloom best if kept drier in the winter and immersed in summer. I prefer a very light loam for seedlings of Crinum, but rather stronger soil for the old bulbs, and I find the use of peat generally prejudicial. If the leaves appear blotched with white, it is a sign that the soil is too retentive, and often that there is peat in contact with the bulb. The scape of Crinum becomes flaccid and leans after flowering.

I have at present 16 different sorts of mules in this genus, viz. from Capense impregnated by Zeylanicum, Speciosum, Scabrum, Erubescens, Cruentum, Defixum, Toxicarium, Brevifolium, Pedunculatum, and Canaliculatum; from Erubescens by Capense, Cruentum, and Americanum; from Scabrum by Exaltatum; from Brevifolium by Americanum; from Defixum by Speciosum. Lord Carnarvon has one from Pedunculatum by Zeylanicum, one from Capense by Americanum, and another by a plant which seems to be an accidental mule from Calcutta, between Defixum and Lorifolium, though sent as Lorifolium; and I believe the changes may be rung through the whole of this extensive genus. The seeds of Crinum, which often lie for near a year without vegetating, may be made to grow immediately by cutting away part of the seed and laying bare the point of the radicle or embryo; but this operation requires a light and skilful hand, as the direction of the sprout is very doubtful. Its point does not appear to issue always through the natural passage, as in other seeds, but, being probably pushed aside by irregular growth and pressure within the capsule, it seems to force its way through the solid fleshy substance, and will even pierce another seed if pressed against it. I have observed that in Erubescens it generally issues near the point of attachment, though sometimes in a contrary direction; in Capense, and also in the mule seed from Erubescens impregnated by Capense, generally at a distance from the point of attachment; a remarkable circumstance probably connected with the irregular growth of the ovules.

URCEOLARIA.

Bulbus rotundus. *Folia* lata, petiolata. *Umbella* 4-pluri?-flora. *Pedunculus* curvatus. *Germen* pendulum, ovatum, triloculare, trisulcum. *Tubus* germinis et pedunculi continuus, parte inferiore gracilis, cylindricus, superiore latè ventricosus. *Laciniæ* breves. *Stigma* trigonum. *Semina* plura. *Patria* America meridionalis. *Species*.

1. Pendula. *Ruiz et Pavon* 287. Crinum urceolatum.

Bulb round. *Leaves* broad, petiolated. *Umbell* 4, or perhaps many-flowered. *Peduncles* curved. *Germ* pendulous, ovate, 3-celled, 3-furrowed. *Tube* continued from the germ and peduncles, very slender and cylindrical near the germ, wide and ventricose in the further part. *Petals* short. *Stigma* triangular. *Seeds* many. *Species* 1. Pendula.

This plant is only known by the figure and imperfect description of Ruiz and Pavon. It is widely distinguishable from Crinum, and appears to have some points of affinity with the plant they call Pancratium latifolium.

CYRTANHUS.

Bulbus subrotundus. *Folia* bifaria, perennia. *Scapus* æstivus. *Umbella* multiflora. *Germen* breve, trigonum, mediâ parte crassius, pedunculi continuum (ambo in C. obliquo curvati et cernui). *Tubus* germinis continuus, curvatus, sub-infundibuliformis obsoletè 6-angularis, fauce amplâ, sulcis intùs sex angulosis 6-dentatâ compactis membranâ cujus apices inter laciniarum bases terminantur. *Laciniæ* breves, alternæ æquales. *Filamenta* longitudinis sub-alternæ, mediâ ferè parte tubi costis inter prædictos sulcos inserta, interiora brevissimo discrimine profundiùs. *Antheræ* breves, erectæ, nisi quòd flos cernuus est. *Stylus* apicem versùs gracilior. *Stigma* minutum, trilobatum. *Capsula* trilocularis. *Semina* nigra, foliaceo-alata. Patria Africa meridionalis. *Species* unica.

* 1. Obliquus. *Bot. Mag.* 1133.

Bulb roundish. *Leaves* bifarious, perennial. *Scape* produced in summer. *Umbel* many-flowered. *Germ* short, triangular, widest in the middle, continued from the peduncle (both curved downwards in C. Obliquus). *Tube* continued from the germ, curved, narrowly funnel-shaped, with six obsolete angles; wide-mouthed, with six angular internal furrows, formed by a membrane with six points, which terminate between the bases of the petals. *Petals* short, the alternate nearly equal (in C. Obliquus the inner much widest). *Filaments* nearly of alternate lengths, inserted near the middle of the tube into the ribs between the aforesaid furrows, the inner a very little lowest. *Anthers* short, erect if the flower were not pendulous. *Style* slenderer towards the point. *Stigma* minute, 3-lobed. *Capsula* 3-celled. *Seeds* black, foliaceously winged. *Country* S. Africa. *Species*. 1. Obliquus.—*Culture*. I understand that this plant is found with the bulb sometimes above ground in Africa. With us it likes a light loam, and a very sparing supply of water in winter. A large number of bulbs of this plant flower very freely in Mr. Griffin's, where they stand on a back shelf near the

glass in the stove; they should have just water enough in the winter to prevent the leaves from perishing, more is injurious. In spring the supply must be increased.

VALLOTA.

Bulbus ovatus. *Folia* bifaria, perennia. *Scapus* æstivus. *Spatha* bifida. *Umbella* 4-5-flora. *Germen* pedunculi erecti continuum, gracile, trigonè oblongum. *Tubus* germine continuatus; pars inferior sub-cylindrica, superior latè infundibuliformis, costâ longâ inter filamenta intùs instructa. *Filamenta* conniventia, tria tubo prope faucem vel laciniis exterioribus extra tubum, tria sub interiorum basi infra tubi faucem, corollæ latere tantùm adnata. *Stylus* declinatus. *Stigma* trigonum, vix trilobatum. *Capsula* 3-locularis. *Semina* nigra, foliaceo-alata. *Patria* Africa meridionalis. *Species.*

* 1. Purpurea. *Bot. Mag.* 1430. Amaryllis Purpurea.
* –. var. minor. *Bot. Reg.* 552.

Bulb ovate. *Leaves* bifarious, perennial. *Scape* produced in the summer. *Spathe* bifid. *Umbel* 4-5-flowered. *Germ* continued from an erect peduncle, slender, triangular, oblong. *Tube* continued from the germ, the lower part nearly cylindrical, the upper widely funnel-shaped, with a long internal rib between each pair of filaments. *Filaments* conniving, three adhering to the tube near its mouth or to the outer petals above the mouth, three to the tube much below the base of the inner petals, and continued like prominent ribs. *Style* declined. *Stigma* triangular, scarcely 3-lobed. *Capsule* 3-celled. *Seeds* black, foliaceously winged. *Country* Africa. *Species.* 1. Purpurea. *Bot. Mag.* 1430. * –. var. minor. *Bot. Reg.* 552.—*Culture.* A very sandy soil is requisite for this plant. It thrives for a while and flowers well in peat, but is very liable to perish in it from too great retention of wet. Like the other bulbs allied to Cyrtanthus it should have very little water in winter, but ought not to lose its leaves. In summer it likes a great deal of moisture. The neck of the bulb should be kept above ground, and the dead coats, which are very retentive of wet, should be pulled from it. From the appearance of the bulb and leaf I suspect that a new species of Vallota has been lately imported from the Cape by Mr. Lee. I am told that the name Vallota, given by Mr. Salisbury, has been adopted in France; but the genus has not been before defined.

MONELLA.

Bulbus parvulus, ovatus aut subrotundus. *Folia* bifaria, decidua. *Scapus* æstivus. *Umbella* 2-pluriflora. *Germen* pedunculo rectè continuatum, trigonè ovale. *Tubus* intùs lævis, parte inferiore curvatâ, arctâ, superiore subinfundibuliformi, vel ventricosâ, amplâ. *Laciniæ* breves, subæquales. *Filamenta* tubo prope faucem inserta, alterna brevi discrimine profundiùs et breviora. *Stylus* incurvatus. *Stigma* trifidum. *Capsula* ovalis, trilocularis. *Loculi* ovulis circitèr 20. *Semina* nigra, foliaceo-alata. *Patria* Africa meridionalis. *Species.*

SECTIO 1. TUBO SUBINFUNDIBULIFORMI.

* 1. Angustifolia. *Bot. Mag.* 271.
* 2. Odora. *Bot. Reg.* 503.
* 3. Ochroleuca. *Burchell herbar.*

SECTIO 2. TUBO VENTRICOSO.

* 4. Spiralis. *Bot. Reg.* 167.
5. Glauca. *Burchell.* Cyrtanthus Collinus, *Bot. Reg.* 162.
* 6. Ventricosa, *Willden.* Cyrtanthus angustifolius. *Jacq. Hort. Schœn.*

Bulb small, ovate or roundish. *Leaves* bifarious, annual. *Scape* produced in summer. *Umbel* from two to many-flowered. *Germ* continued from a straight peduncle, triangularly oval. *Tube* smooth within, the lower part narrow and curved, the upper part narrow-funnel-shaped or ventricose, with the mouth open. *Petals* short, nearly equal. *Filaments* inserted in the tube near the mouth, the alternate a little deeper, shorter. *Style* curved. *Stigma* trifid. *Capsule* oval, 3-celled. *Cells* with about 20 ovules in two rows. *Seeds* black, foliaceously winged. *Country* S. Africa. *Species.* § 1. *Tube narrow-funnel-shaped.*—* 1. Angustifolia. *Bot. Mag.* 271.—* 2. Odora. *Bot. Reg.* 503.—* 3. Ochroleuca. *Burchell herbarium.*—§ 2. *Tube ventricose.*—* 4. Spiralis. *Bot. Reg.* 167.—5. Glauca. *Burchell.* C. Collinus. *Bot. Reg.* 162.—* 6. Ventricosa. *Willd.* C. Angustifolius. *Jacquin.*—*Culture, &c.* The leaves of all the species seem to be annual, and the bulbs should be left dry in the winter; being planted in a sandy soil, not peat. The flowers of the first section incline to one hand, of the second diversely; but the sections cross each other in another important feature; Angustifolia agreeing in its pendulous posture with Spiralis and Glauca, Ventricosa in a more erect habit with Odora ond Ochroleuca. Ochroleuca appears to be chiefly distinguishable from Odora in colour, and perhaps ought to be considered as a local variety, though all the native specimens in Mr. Burchell's herbarium are of a yellowish white. As yet I have only seen the flower of Angustifolia in a fresh state. Glauca is lost in this country. The name Monella was suggested by Mr. Salisbury; as well as that of the following genus, though I believe he makes further divisions, to which I should object. The editor of the Bot. Reg. has hastily quoted Jacquin's Cyrtanthus ventricosus, as synonymous with Spiralis, saying that Jacquin has put the leaf of another plant to it. Jacquin's figure is however correct, and the flower is essentially distinct from Spiralis, which has the coroll pendulous, and the style shorter than the tube, while Jacquin's plant has the tube wider, and only a little inclined, and the style much longer than the tube.

GASTRONEMA.

Bulbus, folia, germen, pedunculus, laciniæ, et *stigma,* ut in Monellâ. *Tubus* ut in Monellâ Ventricosâ, parte inferiore cylindricâ, arctâ, curvatâ; superiore ventricosâ, amplâ. *Filamenta* conniventia, alternè longiora; interiora summâ ferè, exteriora mediâ ferè parte tubi regionis ventricosæ inserta; superiora tria prope tubi latera tortè declinata, inferiora recta apicibus conniventibus. *Antheræ* breves, incumbentes. *Stylus* declinatus, laciniæ inferiori adpressus. *Patria* Africa meridionalis. *Species.*

* 1. Clavatum; 1-2-florum. *Bot. Reg.* 168. C. Uniflorus. *Willd. Am. Clavata.*

Bulb, leaves, germ, peduncle, petals, and *stigma,* as in Monella. *Tube* as in M. Ventricosa, the lower part cylindrical, narrow, curved; the upper ventricose, wide. *Filaments* conniving, the alternate longer; the inner inserted near the top, the outer near the base of the ventricose part of the tube; the three upper tortuously declined round the sides of the tube; the three lower straight, with their points conniving. *Anthers* short, incumbent. *Style* declined, and pressed against the lower petal. *Country* S. Africa. *Species.* * 1. Clavatum. *Bot. Reg.* 168.—*Culture, &c.* The same culture suits this plant and the genus Monella. It has flowered with Mr. Burchell in the open ground, bearing two flowers on a stem, on which account I have restored its original name Clavatum, Uniflorum being incorrect. If the bulbs are set in the open ground, it would probably be advisable to take them up in the winter, or at least to place them in a very dry border.

HIPPEASTRUM.—*Knight's-star-lily.*

Bulbus subrotundus. *Folia* bifaria, annua vel persistentia. *Scapus* 2-7-florus, pedunculatus, cavus. *Spatha* bifida. *Pedunculus* rectus apice curvato, cavus: *Germen* trigonè et sub-turbinatè oblongum mediâ parte paullùm constrictum, diversâ directione à tubo et pedunculo declinatum. *Tubus* extùs trigonè subinfundibuliformis, externarum laciniarum marginibus summâ parte extùs imbricantibus. Tubi faux arcta, obliqua, latere inferiore abbreviata, parte superiore intùs vel lævis, vel gibbo parvulo munita, vel fimbriata, vel calyptrata. *Laciniarum* quaterna discrepantia, exterarum superior duabus latior, internarum inferior duabus angustior. *Filamenta* declinata, imæ laciniæ adpressa, assurgenter curvata, quaternâ longitudinis discrepantiâ, quaternâ quoque positurae variatione gradatim tubo infra laciniarum junctionem inserta; externa internis breviora, sed ea tantùm quæ basi consimilium laciniarum supposita sunt, longitudine et positurâ consimilia; superius minùs abbreviatum, imum minùs elongatum; superius altiùs, imum profundiùs insertum. *Stylus* declinatus. *Stigma* trilobum, sæpius trifidum. *Capsula* germine erectior, 3-locul. 3-valv. extùs inter loculos profundè sulcata, undè sectio transversa trilobata. *Loculi* ovulis 18-40 vel ultra, fructu maturo hiantes. *Ovula* liquore repleta, complanata, cumulata, angulo interiori loculorum biseriatim alligata, marginibus rotundatis alternatim imbricantibus. *Semina* uno ordine conserta, foliaceo-alata, integumento duplici separabili, testâ externâ nigrâ. Incolunt Hemisph. Occid. *Species.*

* 1. Crocatum. *Bot. Reg.* 38.
* 2. Pulverulentum. *Bot. Reg. v.* 7. A. Acuminata.
* 3. Fulgidum. *Bot. Reg.* 226.
* –. var. miniata. *Bot. Mag.* 1943. Am. Miniata.
* 4. Rutilum. *Bot. Reg.* 23.
* 5. Equestre; tubo gracili, cernuo; stigmate rotundatè et breviter trilobo. v. minor. *Bot. Mag.* 305.
* –. var. major. *Bot. Reg.* 234.
* –. var. plena.
* –. var.? Glabrifolia.
6. Miniatum. *Ruiz et Pavon*, tubo brevi fauce fimbriatâ, laciniis exteris angustioribus.
* 7. Reginæ. *Bot. Mag.* 453. Stigmate rotundatè et breviter trilobo.
* 8. Vittatum. *Bot. Mag.* 129.
* –. var. Latifolia. *Lindley Coll. Bot.*
* 9. Solandriflorum. *Lindley Coll. Bot.*
* –. var. Striata.
* 10. Psittacinum. *Bot. Reg.* 199.
* 11. Calyptratum. *Bot. Reg.* 164.
* 12. Aulicum. *Bot. Reg.* 444. Laciniis exteris angustioribus; laciniâ imâ labris filamenta comprehendente.
13. Advena; *sp. mihi non visa. Bot. Mag.* 1125.

Bulb roundish. *Leaves* bifarious, annual or perennial. *Scape* 2-7-flowered, with peduncles, hollow. *Spathe* 2-cleft. *Peduncle* straight, with the end curved, hollow. *Germ* triangularly oblong, a little wider at the top, and constricted as if by a ligature in the middle. *Tube* without triangularly narrow-funnel-shaped, the margins of the outer petals lapping over. Mouth of the tube closed, oblique, being abbreviated on the lower side; within smooth, or furnished above with a small knob, or fringe, or screen. *Petals* of four different breadths, of which the upper outer petal is wider than the other two; the lowest inner narrower than the other two inner petals. *Filaments* lying in the channel of the lowest petal, bent upwards, of four different lengths, inserted *into the tube below the junction of the petals* with a fourfold and graduated variation of position, the insertion of the upper one being

highest, and of the lower lowest. The outer filaments shorter than the inner, those only being alike in length and posture which are placed at the foot of corresponding petals, the upper of the outer being less abbreviated, and the lowest of the inner less prolonged. *Style* declined. *Stigma* 3-lobed, generally trifid. *Capsule* more erect than the germ, 3-celled, 3-valved, deeply furrowed without between the cells, so that the transverse section is 3-lobed. *Cells* with from 18 to 40 or more ovules in each, opening when the capsule is ripe. *Ovules* containing a fluid, flat, piled in two rows and tied to the inner angle of the cells, with their edges rounded and lapping alternately. *Seeds* closing into one row, wingedly foliaceous, with two integuments, the outer shell black. Inhabit the western hemisphere. *Species.* * 1. Crocatum. *Bot. Reg.* 38.—* 2. Pulverulentum. *Bot. Reg. v.* 7. A. Acuminata.—* 3. Fulgidum. *Bot. Reg.* 226.—* - var. miniata. *Bot. Mag.* 1943. A. Miniata.—* 4. Rutilum. *Bot. Reg.* 23.—* 5. Equestre; v. minor. *Bot. Mag.* 305.—* - var. major. *Bot. Reg.* 234.—* - var. double.—* var. smooth-leaved.—6. Miniatum. *Ruiz and Pavon;* tube short and bearded within, outer petals narrowest.—* 7. Reginæ. *Bot. Mag.* 453.—* 8. Vittatum. *Bot. Mag.* 129.—* - var. latifolia. *Lindley Coll. Bot.*—* 9. Solandriflorum. *Lindley Coll. Bot.*—* - var. Striata.—* 10. Psittacinum. *Bot. Reg.* 199.—* 11. Calyptratum. *Bot. Reg.* 164.—* 12. Aulicum. *Bot. Reg.* 444. The lowest petal embracing the filaments.—13. Advena. *Bot. Mag.* 1125. *Never seen by me in flower.—Culture, &c.* Vittatum is a hardy plant, and if not planted too near the surface will thrive and ripen its seed in the open border. A little sawdust may be thrown over in winter to exclude the frost. The rest may be considered as stove plants, since they flower best with more warmth than the generality of greenhouse plants require. All the species, as far as they have been tried, appear to breed freely together, and I have already 12 or 13 hybrid crosses. I have never seen an instance of a bulb of this genus producing a solitary flower, and I believe it never occurs. The weakest seedlings produce two. I have seen Vittatum produce seven on a stem, Pulverulentum six, Rutilum five. By a proper alternation of moist and dry, hot and cool treatment, some of the species may be made to flower twice; Fulgidum, and the mule between Fulgidum and Rutilum, even four times in the year. The best soil for the greater part of the genus appears to be a loam of middling strength; for Equestre, Crocatum, and the mule from Reginæ by Crocatum, very sandy; for Vittatum and Reginæ, and the mules between them, rather stronger, but not very retentive. A peat compost will sometimes promote a rapid growth of the bulb and a finer head of flowers, but it is very apt to cause rottenness amongst the fibres, and sometimes destroys the bulb. The last-mentioned sorts should be left nearly dry and in a cool situation in the winter; in the spring, on being brought into a warmer place and watered, they will immediately flower, and push new leaves, after which they should be removed into the greenhouse and left with very little water till August, when by replacing them in the stove and watering them, they may be expected to bloom again. From Fulgidum, and the mules from Rutilum by Fulgidum, flower-stems may be obtained every three months by a similar alternation of moist and dry. Rutilum is more disposed to throw up two simultaneous stems, and will not readily flower at more than two seasons; and if watered constantly it will only flower once. My usual treatment of these bulbs is to set them, after they have made their shoot, on the ground under the shelf upon which the growing plants stand adjoining to the front flue, where they remain almost without water till the point of a flower-bud appears, but in the summer a cooler situation is desirable. The mules of the second cross from Reginæ, or Equestri-vittatum impregnated again by Rutilum, flower repeatedly by setting them in the greenhouse, where they have very little water after flowering, or in summer even out of doors, and on their return into the stove they bloom again. By this treatment from October last, successively through the whole winter and spring, I never had less than 8 or 10 plants in flower at once, which were chiefly mules; and, being removed for ornament into the cool conservatory, the flowers were not injured by the low temperature in winter, but were more durable. Psittacinum appears to require rest in the winter; Calyptratum and Aulicum seem to have their leaves more decidedly perennial than any of the other sorts, but the supply of water should be lessened in winter. I have not had Solandriflorum long, but it appears to me to conform in habit with Vittatum, though perhaps tenderer. Pulverulentum (Bloom-leaved) was so named by me above a year ago, and the name adopted in the Liverpool Catalogue, and I believe by all those who cultivated it in this country; the plant, from which the figure in the *Bot. Reg.* was made, was so labelled in Mr. Griffin's collection. The plant is at once distinguishable from the other species by the glaucous bloom on its leaves; and I know not why the editor should have altered the received name for Acuminatum, but I suppose it was done so inadvertently. In my plant, which has now a six-flowered scape, the germ is reddish, and the tube marked with a reddish colour, like Fulgidum. In the Register the colour of both is green. Seedlings probably vary a little in colour. It will be observed that the peduncles are there described to be one inch, but are represented in the sketch two inches and a half long. They were probably elongated after the description had been made, like the peduncles of Brunsvigia. I have now before me Equestre major, with peduncles five inches and a half long, though it expanded its flower in the greenhouse, with the lights left open day and night, and the "maximum" of their length is stated in the Register to be three inches. The bulb figured in the Bot. Mag. as A. Miniata, is certainly a variety of Fulgidum, and not the A. Miniata of Ruiz and Pavon, which has a bearded tube, and agrees with Aulicum in having the inner petals widest. Bulbs were imported last year from Maranham and Cayenne, with leaves more glossy than Equestre, answering the description of their plant. I learn that one of them produced at Highclere a bearded flower a little darker than Fulgidum, and from the account I have received of it, I have reason to believe that it is a variety of Equestre, unless it be a new species; and I have set it down var. Glabrifolia. I am told that its limb does not expand like that of Equestre, but that its tube is long and bearded. No memorandum was made concerning the posture of the tube or the form of the stigma, which would have decided whether it was a variety of Equestre. In Hort. Kew. the tube of Equestre is erroneously called horizontal, though it is quite cernuous in both major and minor, and as it fades becomes perpendicularly pendulous. Mr. Ker (Journ. Sc. and A.), misled by that erroneous description, has stated that he separates A. Miniata from Equestris, on account of the cernuous tube of the former; but he has since properly defined the tube of Equestris major as sloping downwards (deflexus), and it is so figured. Equestre is distinguished by the slenderness and cernuous habit of the tube (notwithstanding the full-fronting expansion of the limb) and the short round lobes of its stigma, which is very little divided. I have an unknown bulb imported by Mr. Lee, together with Solandriflorum, which has leaves more obtuse and tending to glaucous than either var. of that species, and is reported to have a white flower margined with red. It is probably a new species of this genus, unless it be a variety of Vittatum, which it resembles much in foliage. Advena has been long lost in Europe, unless a bulb which I have had many years in a weakly state be of that species; and I only place it in this genus upon the report of others and the engraving in the Bot. Mag. The first four species, as well as the genus Pyrolirion, produce blind offsets, like some of the Gladioli, which do not vegetate immediately. There is every reason to expect that all the mules of which Vittatum is the mother, will prove hardy in a dry border. Bulbs have been lately imported from Brazil with thickish, erect, glaucous leaves, which perhaps belong to this genus; and we may expect it to be further increased by importations from S. America. After the bulb has been left dry, the scape of Amaryllis (p. 16) rises entirely before the leaves, singly and only once in a year; that of Hippeastrum irregularly but generally just before or with them; that of Crinum some time after. When Hippeastrum produces two scapes in the same season of the year, the second begins to bloom before the first is passed; when Crinum produces 2, 3, or 4, the successive scape rarely, if ever, appears before the flowers of the former are withered. The scape of Hippeastrum is erect after flowering.

COBURGIA.—*Coburg-lily.*

Scapus, spatha, pedunculus, corolla, stylus, stigma, filamenta, antheræ, pollen, bulbus, Hippeastro simillima. *Germen* oblongo-ovale. *Ovula* pauciora (8-14), trigona, oblonga, duobus ordinibus posita angulis interioribus alternatim consertis. *Semina* globosa, nitida, fusco-purpurascentia. *Folia* perennia. Incolunt Americam Meridionalem.

* 1. Reticulata. *Bot. Mag.* 657.
* 2. Striatifolia. *Bot. Reg.* 352. *Bot. Mag.* 2113.

Scape, spathe, peduncle, corolla, style, stigma, filaments, anthers, bulb, pollen, agree with Hippeastrum ‡. *Germ* a little more oblong and not widest at the top. *Ovules* fewer, from 8 to 14 in a cell, triangular, oblong, in two rows, with their inner angles alternating. *Seeds* round, smooth, blackish purple. *Leaves* perennial. Natives of S. America. *Species.* * 1. Reticulata.—* 2. Striatifolia. *Observ.* Striatifolia, though perhaps only a variety of Reticulata, differs, besides the stripe on the leaf, in having a larger spathe, shorter germ and peduncles, tube straighter, petals longer but not wider, paler and less reticulated, the three lower striped with white; and the two lower outer petals, which in Reticulata are broader than the two upper inner petals, are exactly the reverse in Striatifolia. I have seen an intermediate plant, possibly a mule between them. These bulbs require a moderately strong loam, and in summer time a warm, shady, and moist situation. They succeed well in a hotbed, or in a warm part of the stove with moist sand under the pot, which should be so placed as to be rather shaded from the sun by taller plants. The bulbs should not lose their leaves in winter, but unless the supply of water is greatly diminished their fibres will rot. I have seen the bulbs thrive well for a time in peat, but sometimes perish after flowering; and I do not think it can be used with safety. With respect, indeed, to every sort of bulb, the more retentive the soil is in which it is planted, the more carefully the gardener must avoid oppressing it with wet during its period, either of absolute rest, or of cessation from growth; the lighter the soil, the more he must attend to a constant supply of water during its season of activity; and it should be remembered that almost all tender bulbs are accustomed in their native country to very decided seasons of drought and wet.

SPREKELIA.—*Jacobæa-lily.*

Bulbus subrotundus. *Folia* annua. *Scapus* cavus, 1-rarò2-florus. *Spatha* cylindrica apice diviso. *Pedunculus* rectus, cavus. *Germen* à pedunculo declinatum, Hippeastri consimile, nisi quòd crassius et minùs angulosum. *Tubus* sub-nullus. *Lacinia* superior à germine continuata apice reflexo; cæteræ devexæ, præsertim tres inferiores quæ genitalia amplectuntur. *Laciniarum* quaterna diversitas, exterarum superior, internarum inferior duabus latior. *Filamentorum* quaterna longitudo; tria exteris laciniis apposita breviora, superius brevissimum; tria interioribus apposita longiora, imum longissimum. *Filamenta* stylum fasciculatim amplexa, unà cum stylo declinata apicibus resurgenter curvatis; ad basin laciniarum pariter membranâ fimbriatâ juncta et corollæ inserta. *Stigma* trifidum. *Ovula* plana, biseriatim imbricantia. *Capsula* matura et semina non visa. Incolit Americam meridionalem. *Species.*

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‡ *Tube of Coburgia taken from Striatifolia.* A web connects the base of the two upper interior petals, on one side, with the midrib of the upper exterior, and on the other, at a rather lower point with the upper side of the two other or lateral exterior petals. A web connects the lower side of the lateral exterior petals with the undermost inner petal, at a point ¼ of an inch lower. The insertion of the two upper lateral filaments is very little lower than the highest, and the difference would be scarcely observable, if the gradation did not call attention to it.

1. Formosissima. *Bot. Mag.* 47.

Bulb roundish. *Leaves* annual. *Scape* 1, rarely 2-flowered. *Spathe* cylindrical with the end cleft. *Peduncle* straight. *Germ* declined from the peduncle, like that of Hippeastrum, unless a little thicker and less angular. *Tube* almost none. Upper *petal* continued from the germ, with the point bent back, the others sloped downwards, especially the three lowest, which embrace the style and filaments. A fourfold diversity of the *petals*, the uppermost of the outer, the lowest of the inner being wider than the other two of the same rank. A fourfold length of the filaments; the three placed at the foot of the outer petals shorter, the uppermost shortest; the three at the foot of the inner longer, the lowest longest. *Filaments* fasciculately embracing the style, and declined together with it, the point being curved upwards; joined together by a bearded membrane, and inserted at the same height into the corolla at the foot of the petals. *Stigma* trifid. *Ovules* flat, inter-lapping. Ripe capsule and seeds not seen. Inhabits S. America. *Species.* 1. Formosissima. *Bot. Mag.* 47.—*Culture, &c.* I had wished to call this genus Jacobæa, a name to which the public have been long used, but it was called Sprekelia by Heister, though I am not aware that the name has been adopted, and I have therefore thought it right to adhere to that already given to it. It will be observed, that the diversity of the petals and filaments in this genus is founded upon a different rule from that which governs Hippeastrum; whereas Coburgia and Hippeastrum are only distinguishable by the examination of the germ, when the ovules and seeds are seen to be different. The bulbs of Sprekelia are perfectly hardy, and appear to like a low temperature. Its flower-stems rise weakly in the stove, and immediately on removal into the greenhouse acquire strength. It rarely flowers in the open border, though the leaves grow vigorously, unless the bulbs are taken up in the winter, or when by the neighbourhood of a hot flue the earth round them is dried in the winter. If the bulbs are kept for a few months without water, in the stove or greenhouse, they are sure to blow in the spring, producing often two successive scapes; if watered in the winter they will seldom bloom. Perhaps a second interval of drought might induce them to flower again in the autumn. In order to flower them in the open border, the bulbs must be taken up and kept dry in winter. The injury done to the fibres in digging up the bulb destroys the flower-bud of Am. Belladonna, unless it is pretty forward, but it does not appear to prevent the flowering of Sprekelia in the following spring. I have twice known a two-flowered scape of Sprekelia, but I have never known nor heard of its having ripened seed in this country. It seems difficult to regulate the temperature, and the degree of moisture and exposure, so as to suit its fructification. There is a like difficulty with respect to the genus Lycoris, which is neither apt to make seed here nor at Calcutta. The ovules, however, of Sprekelia, when magnified, appear very different from those of Hippeastrum. In Sprekelia the embryo is close to the margin of the ovule, which projects very little on the side next to the dissepiment. The ovule is also narrower and more pointed.

ZEPHYRANTHES.—*Occidental Swamp-lily.*

Bulbus parvus, subrotundus. ***Folia*** linearia angusta, verna. ***Scapus*** cavus, pedunculatus, 1-2-florus. ***Spatha*** in 1-floris cylindrica, in 2-floris bifida, pedunculo et germine longior. ***Germen*** brevè Hippeastri simile, à pedunculo plerumque declinatum, corollâ continuatum, rariùs pedunculo continuatum corollâ declinatâ. ***Ovula*** circiter 14, plana, compressa, lateribus rotundatis, crassiora ac pauciora quàm in Hippeastro, et duplici ordine confusiùs posita. ***Tubus*** brevis, extùs angustè infundibuliformis. ***Laciniæ*** alternæ consimiles, tres exteræ marginibus tubo imbricantibus latiores. ***Filamenta*** distantia, apice conniventia, laciniarum basi extra tubum pariter ferè inserta, alterna (exteriora scilicet) vix profundiùs et breviora; filamentum superius sejunctum et stylo aversum. ***Stylus*** declinatus. ***Stigma*** trifidum. ***Capsula*** ut in Hippeastro. ***Semina*** ordine duplici alternatim imbricantia, plana, dorso rotundato, compressione irregularia, margine vix foliaceo; integumento duplici, exteriore nigro nitente, interiore tenuissimâ separabili, adhærente tamen albumini densè carnoso. ***Embryon*** cylindraceum, longitudine tertiæ partis albuminis, radiculâ umbilico albo cavato approximatâ. ***Incolunt*** plagas Occidentales. § 1. Unifloræ spathâ integrâ. ***Species.***

* 1. Tubispatha, tubo brevissimo, intùs flexu filamentorum rotundato. ***Bot. Mag.*** 1586.
* 2. Atamasco, tubo semunciali subinfundibuliformi. ***Bot. Mag.*** 239.
* –. var. 2. Minor, flore minore.

§ 2. Bifloræ spathâ divisâ.

1. Chloroleuca. ***Ker in Journ. Sc. et A.*** Amaryllis. ***Bauer tab. depict.***
2. Lutea. ***Pavon in herb. Lamb.***

Bulb small, roundish. ***Leaves*** linear, narrow, produced in spring. ***Scape*** hollow, pedunculated, 1 or 2-flowered. ***Spathe*** tubular in the 1-flowered, bifid in the 2-flowered, longer than the peduncle and germ. ***Germ*** short, like that of Hippeastrum, generally declined from the peduncle and continued by the coroll, but sometimes continued from the peduncle, the coroll being sloped. ***Ovules*** flat, compressed, with the edges rounded, thicker and fewer than in Hippeastrum, and placed in two rows more confusedly. ***Tube*** short, outwardly appearing narrow-funnel-shaped. ***Petals***, the alternate alike, the three outer broadest, with their edges overlapping the tube. ***Filaments*** diverging, with the points conniving, inserted nearly at the same point at the base of the petals without the tube, the alternate, viz. the outer, inserted a very little lower, and shortest; the upper filament a little detached and averted from the style. ***Style*** declined. ***Stigma*** trifid. ***Capsule*** as in Hippeastrum. ***Seeds*** in two rows, with their edges lapping alternately, flattened, with the back rounded, irregular by compression, with a scarcely foliaceous margin; two integuments, the outer black and shining, the inner very thin, but separable, though adhering to the solid fleshy kernel. The ***embryo*** cylindrical, about one third of the seed's length, with the radicle approached to the aperture which appears outwardly hollowed and white. ***Inhabit*** the Western Hemisphere.—§ 1. One-flowered, with the spathe tubular.—* 1. Tubispatha, with a very short tube, rounded within by a bend of the filaments.—* 2. Atamasco, with a tube half an inch long, narrow funnel-shaped.—* 2. var. 2. Minor, with smaller flowers.—§ 2. Two-flowered, with the spathe divided.—1. Chloroleuca, ***Ker.*** Amaryllis. ***Bauer's drawing in the Banks. Libr.***—2. Lutea. ***Pavon in Mr. Lambert's herbarium.***—***Culture, &c.*** I am told that a pink variety of Tubispatha is cultivated at Paris. Bulbs of this genus will thrive either in peat, or loam, or a light compost. They may be left nearly dry in winter, especially Atamasco which flowers in the spring; but require abundance of water while growing. Atamasco will thrive in the stove, or greenhouse, or even in the open border. Tubispatha will live in the greenhouse, but does not flower without artificial heat, and

the bulbs which I planted out perished. In the stove it increases rapidly, soon filling the pot, whence its flowers spring up in succession two or three at a time. In both species I observe, that at the first appearance of the bud the coroll is naked at the point, being longer than the spathe. This is probably a generic feature; and from the rapidity of their expansion, the vulgar name *jump-ups*, which is given to Crocuses, would be equally applicable to them. It is possible that Pavon's Lutea may be the same plant as Bauer's Chloroleuca, or at least a brighter coloured variety. They appear to differ from Tubispatha (judging from the drawing and specimen) in nothing material but the divided spathe and 2-flowered scape, and I am satisfied that they belong to the same genus. I do not remember whether the spathe of Sprekelia Formosissima became bifid in the 2-flowered specimens, and that which I deposited at Sir J. Banks's is for the present mislaid; but I think the division of the spathe is likely to accompany at all times a 2-flowered scape. The description of the seed is taken from Atamasco. That of Tubispatha is not materially different. The internal difference in their tubes is not greater than occurs in the genus Hippeastrum.

PYROLIRION.—*Fiery-lily.*

Bulbus ovatus, bulbuliferus. ***Folia*** angusta suberecta. ***Scapus*** uniflorus. ***Spatha*** bifida imâ parte integrâ? ***Germen*** sessile vel pedunculo rectè continuatum, mediâ parte crassius. ***Tubus*** parte inferiore angustus, cylindricus, summâ parte ventricosus. ***Laciniæ*** subæquales apice reflexo. ***Filamenta*** erecta, subæqualia. ***Antheræ*** incumbentes. ***Stylus*** declinatus. ***Stigma*** trifidum. ***Patria.*** America meridionalis. ***Species.***

1. Flammeum. ***Ruiz et Pavon.* 286. *Spec. in Herb. Banks.***
2. Aureum. ***Ib.*** Amaryllis Peruviana. ***Ker.***
3. Flavum. ***Pavon, spec. in Herbar. Lambert.***

Bulb ovate, surrounded by offsets (as are also the smooth-throated species of Hippeastrum). ***Leaves*** narrow, nearly erect. ***Scape*** one-flowered. ***Spathe*** bifid, undivided at bottom? ***Germ*** sessile, or continued in a straight line from the peduncle, thickest in the middle. ***Tube*** narrow and cylindrical in the lower part, ventricose in the upper. ***Petals*** nearly equal, with the point bent back. ***Filaments*** erect, nearly equal. ***Anthers*** incumbent. ***Style*** declined. ***Stigma*** trifid. ***Country*** S. America. ***Species.*** 1. Flammeum. ***Ruiz and Pavon*** 286.—2. Aureum. ***Ib.***—3. Flavum. ***Pavon spec. in Mr. Lambert's herbarium. Observ.*** The species of this genus are only known to me by the plate and description of Flammeum and Aureum, a specimen of Flammeum in the Banksian, and of Flavum in Mr. Lambert's herbarium. It is evident that they form a genus. In the specimens of Flammeum and Flavum the germ is quite sessile; in the plate of Flammeum and Aureum, it is placed on a peduncle more than half an inch long, which is perhaps an error by the artist, as the peduncle is not mentioned in the description.

IXIOLIRION.—*Ixia-lily.*

Bulbus ovatus, sub-uncialis. ***Folia*** linearia; radicalia longiora, breviora in caule quasi bracteæ. ***Pedunculi*** axillares et terminales, 1-2 flori. ***Germen*** oblongum, tenue, pedunculo continuatum. ***Corolla*** ad basin divisa, laciniæ exteriores angustiores, minùs coloratæ. ***Filamenta*** alterna æqualia. ***Stigma*** (ut videtur) simplex. ***Capsula*** oblonga, striata, trilocularis, trivalvis. ***Patria*** Syria, &c. ***Species.***

1. Tataricum. ***Spec. in herb. Lamb.*** Amaryllis.
2. Montanum. ***Spec. in herb. Banks.***

Bulb ovate, about an inch long. *Leaves* linear; those from the bulb longer, those on the stalk shorter and bracte-like. *Peduncles* axillary and terminal, 1-2-flowered. *Germ* slender, oblong, continued by the peduncle. *Coroll* divided to the bottom; the outer petals narrower and less coloured. *Filaments* alternately equal. *Stigma* (apparently) simple? *Capsule* oblong, striated, 3-celled, 3-valved. *Country* Asia.—Montanum grows in Syria, near Aleppo.—Only known to me by the specimens. The inner petals of both species appear to be blue or purple, the outer striped with green. The capsule appears to have a hard shell, which is striated or ribbed. The appearance of the bulb is intermediate between that of Amaryllideæ and Ensatæ.

OPORANTHUS.—*Autumnal Crocus-lily.*

Bulbus subrotundus. *Folia* autumnalia, hiemalia. *Scapus* autumnalis, uniflorus. *Spatha* cylindracea, apice diviso. *Tubus* subinfundibuliformis, brevis. *Laciniæ* alternæ æquales, exteræ latiores. *Filamenta* pariter infra laciniarum junctionem tubo inserta, externa breviora. *Stigma* trifidum. *Germen* sessile, tubo et scapo directè continuatum, ovale, complanatum, triloculare. (*Loculi* 7-9 ovulis biseriatim positis). *Ovula* subrotunda, angulis compressione incertis, margaritacea. *Regiones* incolunt mari Magno, Hadriatico, et Ægeo finitimas. *Species.*

* 1. Luteus; var. latifolia. *Bot. Mag.* 290.
* –. var. 2. Angustifolia.
Huic generi referendæ sunt (nisi Sternebergia *Kitaib.* genus sit per se).
2. Colchiciflorus. *Kitaib.*
3. Clusianus. *Clus. hist.* 1. 163. Narcissus Persicus.
4. Exiguus. *Schousboe maroc. p.* 1. 160. Amaryllis.
5. Citrinus. *Smith prodr. fl. græc.* 1. 221. Amaryllis.

Bulb roundish. *Leaves* autumnal, continuing through the winter. *Scape* autumnal, one-flowered. *Spathe* cylindrical, covering the germ, divided at the end. *Tube* narrow funnel-shaped, short. *Petals* alternately equal, the outer broadest. *Filaments* inserted a little below the junction of the petals at the same height into the tube, those belonging to the outer petals shortest. *Stigma* trifid. *Germ* sessile, continued in a straight line from the scape and tube, oval, flattened, 3-celled. (*Cells* with from 7 to 9 ovules in a row, in two rows, with an odd one at top, *in Lutea*). *Ovules* roundish, irregularly angular by compression, like pearls. *Inhabit* the countries bordering on the Mediterranean. *Species.* *1. Luteus; v. latifolia. *Bot. Mag.* 290.—* –. var. 2. Angustifolia. To this genus belong also, unless Sternebergia, *Kitaib.* be a genus by itself, 2. Colchiciflorus.—3. Clusianus.—4. Exiguus.—5. Citrinus.—Luteus is perfectly hardy, and probably the others would also endure our winters. I understand from Mr. Salisbury that the name Oporanthus was given to Luteus by L'Ecluse, I should otherwise have preferred the name Crocolirion. Colchiciflorus accords particularly with Crocus, in having the tube partly under ground, and the capsule protruded out of the earth at a later period. I should not consider that circumstance alone sufficient to warrant its separation from Luteus, under the name Sternebergia, given to it by Kitaibel, and the descriptions of the four last species accord with my definition of Oporanthus; but as I have not seen the flower of any of them, I cannot pretend to decide that there may not be grounds for separating Sternebergia from Oporanthus, though I am not aware of them. I have not seen the ripe seed of Luteus. Oporanthus differs from Zephyranthes in a lower insertion of the filaments, a sessile flower, a flattened and erect germ, rounder ovules, and no sejunction of a filament; probably in capsule and ripe seeds still more.

PANCRATIUM.

Bulbus ovatus. *Folia* æstiva, aut perennia. *Scapus* 1-pluri-florus solidus. *Spatha* in unifloris latere uno dehiscens, in cæteris bifida. *Germen* trigonè oblongum, breviter pedunculatum. *Tubus* trigonè subcylindricus. *Corona* dentata staminifera. *Filamenta* conniventia, alterna æqualia. *Antheræ* breves, mediâ ferè parte filamentis affixæ, *Polline* lævi. *Stigma* rotundatè trigonum, fimbriatum. *Ovula* rotundatè complanata, duobus ordinibus alternantia, in loculis cumulata et puncto prostante angulo interiori adhærentia. *Semina* testâ nigrâ, margine vix foliaceo. *Patria* Europa, Africa septentrionalis, Asia; et (vix credo) America septentrionalis? *Species.*

* 1. Maritimum. *Bot. Reg.* 161.
2. Canariense. *Bot. Reg.* 174.
* 3. Illyricum. *Bot. Mag.* 718.
* 4. Verecundum. *Bot. Reg.* 413. Biflorum, et Triflorum, *Roxburg.*
* 5. Zeylanicum. *Bot. Reg.* 479.
6. Longiflorum. *Roxburg. Ker Journ. Sc. and Arts.*

Bulb ovate. *Leaves* produced in the spring and summer, or perennial. *Scape* solid, 1-many-flowered. *Spathe* in the one-flowered divided on one side, in the rest bifid. *Germ* triangularly oblong, on a short peduncle. *Tube* triangularly cylindrical, a little wider towards the mouth. *Cup*, bearing the stamina, dentate. *Filaments* conniving, the alternate equal. *Anthers* short, attached nearly at their middle to the filaments. *Pollen* smooth. *Stigma* with three-rounded angles, fimbriated. *Ovules* rounded, flattened, alternating in two rows, placed horizontally in the cells, and adhering to their inner angle by a projecting point. *Seeds* with a black shell, and margin scarcely foliaceous. *Inhabit* Europe, N. Africa, including the islands, Asia, and perhaps N. America, which I think doubtful. *Species.* * 1. Maritimum. *Bot. Reg.* 161.—2. Canariense. *Bot. Reg.* 174.—* 3. Illyricum. *Bot. Mag.* 718.—* 4. Verecundum. *Bot. Reg.* 413. * 5. Zeylanicum. *Bot. Reg.* 479.—6. Longiflorum. *Roxburg. Ker Journ. Sc. and Arts.*—*Observ. and Culture.* The name of Pancratium, which in the Hort. Trans. I had proposed to retain to a group of Occidental bulbs, having been originally given to Maritimum, should properly remain with it. Maritimum differs from the other five enumerated, in having leaves which are not perishable in winter, unless exposed to frost. My observations on the pollen and ovules, are taken from Illyricum, which Mr. Salisbury, in the Hort. Trans. has detached under the name Almyra, more properly Halmyra, I believe on account of its seeds not having the foliaceous margin of Maritimum; but Canariense, which exactly conforms with Illyricum in leaf and flower, has ripened seed at Mr. Griffin's with a slight projection of the margin; and, although I have never seen the seed or flower of Maritimum, I apprehend that there is no substantial difference. I have no account of the seeds of the Asiatic species: they do not ripen with us or at Calcutta, where Verecundum is indigenous, but the seed probably brought from the higher lands by the floods. I neglected to examine sufficiently the ovules, which appeared to me rounder. If the seeds should turn out to be substantially distinct, I should give them the name of Tiaranthus, which I had intended for the whole of this group, when I proposed to preserve Pancratium to certain Occidental species. Bulbs of Maritimum are often sent to this country from America, under the name of Carolinianum, and Pursh says that it grows on the coast of Carolina and Georgia; but he quotes P. Verecundum, *Hort. Kew.* and the plate 5, in Catesby's appendix, which are certainly not Maritimum. Catesby's Fig. has green leaves, sessile germ, and petals not adhering to the cup, being either a many-flowered variety of Hymenocallis Rotata ill-represented, or a true and distinct Hymenocallis Caroliniana, which is a desideratum in our collections. It is quite distinct from the glaucous Maritimum, which is sent under the name of Carolinianum from the gardens in America, and is perhaps naturalized on the coast. Catesby's plant grew in a bog near Palluchacula, an Indian town in Georgia, on the Savanna river, which accords with the habit of H. Rotata. P. Maritimum grows naturally in the sea sand, and does not flower willingly with us. Perhaps a manured compost of sand, leaves, and dung, like that recommended for Hyacinths, a hotbed in the autumn, and a cool situation during the rest of the year, might be found to suit it. Illyricum is perfectly hardy, and though it grows in sea sand, it appears to like a rich and even manured soil. P. Canariense is in the collection of Mr. Griffin. P. Longiflorum is only known to us by the description and drawing of Dr. Roxburg. It seems to be unknown and lost at Calcutta. Verecundum and Zeylanicum require a cool season of rest; if kept dry in the stove, the bulbs are apt to fret and perish, but they bear the voyage well and flower immediately after their arrival, which indicates that the bulbs should be taken out of the earth and placed in a cool room. I think it very probable that we shall find them succeed in the open ground or greenhouse in the summer. To this genus probably belongs

Pancratium Maximum. *Forskäl. fl. Ægypt. arab.* 72. with a very large solitary white flower.

STENOMESSON.

Bulbus rotundus. *Folia* angusta. *Scapus* præcox? *Umbella* pluriflora, pedunculata. *Germen* pedunculo rectè continuatum, ovatum, trisulcum. *Tubus* mediâ parte angustior, summâ ventricosus. *Laciniæ* breves, reflexæ, vel forsan etiam semipatentes. *Nectarium* dentatum filamenta connectens. *Filamenta* suberecta, alterna longiora. *Antheræ* breves, incumbentes. *Stigma* obtusum, ut videtur simplex. *Capsula* latè ovata, trisulca, valvis dehiscens. *Semina* nigra, curvatim oblongo-ovata. *Patria* America meridionalis. *Species.*

1. Coccineum. *Ruiz et Pavon, p.* 285. Pancratium Croceum. *Redouté.*
2. Flavum. *Ruiz et Pavon. p.* 284. Pancratium.
3. Rubrum. *Sp. inedita. Specimen in Herb. Lambert.* Pancratium *Pavon.*

Bulb round. *Leaves* narrow. *Scape* before the leaves? *Umbell* many-flowered, pedunculated. *Germ* continued straight from the peduncle, ovate; 3-furrowed. *Tube* slenderest in the middle, ventricose in the upper part. *Petals* short, reflex; perhaps in some only half expanded. *Cup* dentate, connecting the filaments. *Filaments* nearly erect, the alternate longer. *Anthers* short, incumbent. *Stigma* obtuse, apparently simple. *Capsule* widely ovate, 3-furrowed, opening by valves. *Seeds* black, oblong-ovate, but curved. *Inhabit* S. America. *Species.* 1. Coccineum.—2. Flavum.—3. Rubrum. I am not aware of these plants having ever been brought to Europe, but I suspect that I have a bulb of the genus. P. Aurantiacum, *Kunth,* probably belongs to this genus.

CLINANTHUS.

Folia angusta, ensiformia, basi tubulosâ scapum amplexâ. *Umbella* 2-pluriflora. *Pedunculi* erecti. *Germen* trisulcum sub-rotundum. *Tubus* declinatus, infundibuliformis. *Laciniæ* breves, à tubo directè (ut videtur) continuatæ. *Patria* America meridionalis. *Species.*

1. Luteus. *Sp. inedita. Specimen à Pavon in herbar. Lambert.*

Leaves narrow, ensiform; with a tubular base embracing the scape. *Umbell* two or more flowered. *Peduncles* erect. *Germ* with three furrows, nearly round. *Tube* sloped from the germ, funnel-shaped. *Petals* very short, apparently continued straight from the tube. *Country* S. America. *Species.* 1. Luteus. Only known by *Pavon's Specimen in Mr. Lambert's herbarium.* Pancratium Luteum.

CARPODETES.

Bulbus oblongus. *Folia* ensiformia. *Scapus* solidus, pedunculatus, pauciflorus. *Spatha* 1-phylla, fissa. *Pedunculi* erecti. *Germen* trisulcatum oblongum, mediâ parte coarctatum, pedunculi continuum. *Tubus* imâ parte tenuis, cylindricus, curvatus, summâ ventricosus. *Laciniæ* patentes. *Corona* dentata staminifera. *Filamenta* alterna æqualia. *Stigma* simplex, dilatatum. *Capsula* germini conformis, crassior. *Semina* nigra, magna. *Patria* America meridionalis. *Species.*

1. Recurvatus. *Ruiz et Pavon.* 285. Pancratium.

Bulb oblong. *Leaves* ensiform. *Scape* solid, pedunculated, few-flowered. *Spathe* of one leaf, split. *Peduncles* erect. *Germ* with three furrows, oblong, contracted in the middle. *Tube* slender, cylindrical, and curved in the lower part, ventricose in the upper. *Petals* patent or reflex. *Cup* dentate, bearing the filaments. *Filaments* alternately equal. *Stigma* simple, thicker than the style. *Capsule* like the germ, but thicker. *Seeds* large, black. *Country* S. America. *Species.* 1. Recurvatus. Only known by the figure and description of Ruiz and Pavon, by which the genus may be sufficiently determined. I have named it Carpodetes, from the constriction of the middle of the germ and capsule.

LEPERIZA.

Bulbus subrotundus, squamosus; squamæ (ut videtur) non ipsæ foliorum bases, sed, veluti bracteæ, petiolum amplexæ. *Folia* petiolata. *Umbella* (in Latifoliâ) circiter 7-flora. *Pedunculus* curvatus. *Germen* trisulcum, ovatum, pedunculo continuatum. *Tubus* brevis, obversè infundibuliformis. *Laciniæ* conniventes. *Corona* dentata, staminifera. *Filamenta* sinuatim conniventia. *Antheræ* breves, incumbentes. *Stigma* dilatatum. *Capsula* pendula, germini conformis. *Semina* parva, obovata. *Patria* Peru. *Species.*

1. Latifolia. *Ruiz et Pavon.* 284. Pancratium.

Bulb roundish, scaly, the scales not forming the base of the leaves, but embracing the petiole, like bractes. *Leaves* petiolated. (*Umbel* about 7-flowered in L. Latifolia). *Peduncle* curved. *Germ* with three furrows, ovate, continued directly from the peduncle. *Tube* short, wider at bottom. *Petals* conniving (but with the points bent back?). *Cup* dentate, bearing the filaments. *Filaments* sinuous, conniving. *Anthers* short, incumbent. *Stigma* thicker than the style. *Capsule* pendulous, like the germ. *Seeds* very small, obovate. *Country* Peru. *Species.* 1. Latifolia. Known only by the figure and description of Ruiz and Pavon. I have named it from λέπη and ῥίζα, on account of its scaly root.

LIRIOPE.

Bulbus subrotundus. *Folia* bifaria, angusta. (*Scapus* circiter 5-florus in L. Ringente). *Germen* sessile vel subsessile, declinatum. *Tubus* germine continuatus, brevis, cylindricus. *Corona* declinata, imâ parte staminifera, summâ filamenta comprehendens labio reflexo eroso. *Laciniæ* reflexæ. *Filamenta* et *stylus* declinata, apice assurgenter curvato; alterna æqualia. *Antheræ* breves incumbentes. *Stigma*, ut videtur, rotundatè obtusum. *Patria* America meridionalis. *Species*.

1. Ringens. *Ruiz et Pavon*. Pancratium.

Bulb roundish. *Leaves* bifarious, narrow. (*Scape* in L. Ringens about 5-flowered). *Germ* sessile or subsessile, sloped so as to be nearly horizontal. *Tube* continued from the germ, short, cylindrical. *Cup* sloped, the lower part bearing the filaments, the upper part including them, with the lip bent back and notched. *Petals* bent back. *Filaments* and *style* sloped, with the points curved upwards. *Anthers* short, incumbent. *Stigma* apparently round and obtuse. *Country* S. America. *Species*. 1. Ringens. Only known by the figure and description of Ruiz and Pavon. I have given it the name of Liriope, the mother of Narcissus, on account of the upper part of the cup including the filaments.

Pancratium Viridiflorum, *Ruiz et Pavon*. 3. 55.—P. Variegatum. *Ib.*—P. Incarnatum. *Kunth* 1. 223.—P. Humile. *Cavan. ic.*—P. Parviflorum. *Redouté:* mihi ignota, generum sunt omnia, ut videtur, diversorum, et novis nominibus designanda.

CALOSTEMMA.

Vide Bot. Mag. 2100, 2101, *et* 2124 *in notâ, et Bot. Reg.* 421 *et* 422.

This genus never having been confounded with Pancratium, is not properly within my limits. I placed Calostemma Purpureum in a pan of water while it was in flower, in consequence of the notice given of its habits in the Bot. Mag. which had very near caused the loss of the bulb, as its fibres rotted immediately. Both Purpureum and Luteum appear to suffer from much water, especially in winter; and, although found in the neighbourhood of water, they do not appear to be swamp plants; and one of them is mentioned by Oxley as growing on a dry hill.

PROIPHYS.

Bulbus ovatus. *Folia* latissima, petiolata. *Scapus* folia vix præcurrens. *Spatha* trifida. *Umbella* multiflora. *Pedunculi* recti. *Germen* ovale, tubo et pedunculo continuatum, dissepimentis imperfectis vix triloculare, loculis dispermis, rarius trispermis. *Tubus* cylindricus, angulis obsoletis. *Laciniæ* alternæ æquales (in Amboinensi exteræ angustiores). *Filamenta* divaricata, basi dilatatâ, complanatâ, proximis contiguâ, extra tubum inserta, et membranâ tenuissimâ vix discernendâ ibi connexa; alterna (extera scilicet) breviora. *Antheræ* breves, imâ parte filamentis affixæ. *Stylus* erectus, cylindricus. *Stigma* punctum attenuatum, fimbriatum. *Ovula* obovata, apice dehiscente, embryo exserto; unum e duobus in loculis singulis sæpè erectum, alterum pendulum. *Capsula* obovata, acumine brevi, tricostata, dissepimentis marcidis. *Semina* duobus integumentis crassè carnosis, albumine bulbum in capsulâ adhuc immaturâ integumentis dehiscentibus protrudente. *Patria* Amboyna, Sumatra. *Species*.

* 1. Amboinensis. *Bot. Mag.* 1419. Pancratium.

Bulb ovate. *Leaves* very broad, petiolated. *Scape* rising a little before the leaves. *Spathe* trifid. *Umbel* many-flowered. *Peduncles* straight, *Germ* oval, continued from the peduncle and tube, scarcely three-celled (the dissepiments being imperfect) with two ovules in a cell, rarely three. *Tube* cylindrical, with obsolete angles. *Petals* alternately equal (in P. Amboinense the outer narrowest). *Filaments* diverging, with the base greatly dilated and flattened, touching each other and adhering to the petals just without the tube, and near that point united by a fine and almost imperceptible membrane, the outer shortest. *Anthers* short, joined at the lowest extremity to the filaments. *Style* erect, cylindrical. *Stigma* an attenuated point, fringed. *Ovules* obovate, with the point open, and the embryo protruded; one of the two often erect, and the other pendulous. *Capsule* obovate, with a short point, 3-ribbed, with the dissepiments decayed. *Seeds* with two thick fleshy integuments, the internal albumen protruding a bulb through the aperture of the integuments into the capsule before its maturity. *Country* Amboyna, Sumatra. *Species*. * 1. Amboinensis. *Bot. Mag.* 1419. Pancratium.—*Culture and observations.* This plant flowers readily in the stove after a season of rest; and its time of blossoming may be varied accordingly. It is singular that it should ever have been called a Pancratium, since it has no cup, though the enlargement of the base of the petals, where they touch each other, gives the appearance of a cup. The genus was named Eurycles by Mr. Salisbury in the Hortic. Trans. from the breadth of its leaves, which can scarcely be depended upon as a generic feature; and as he has not defined the genus, and the name does not appear to have been adopted, I have (though generally very unwilling to alter a name unnecessarily) called it Proiphys, on account of the singular circumstance of the premature germination of the seed, and the protrusion of the embryo from the ovule, to which I know nothing similar or analogous. Seeds of Crinum and Hymenocallis will often sprout in the capsule, if suffered to remain in it after it is ripe and dried up, but that is merely as grain will sprout in the ear; and the young bulb is formed at the end of the sprout which issues from the seed and pierces the earth. In Proiphys the bulb itself is protruded from the seed at the point furthest from its attachment in the capsule before it is ripe, at which time, if taken out, the seed and bulb attached to it will perish. The embryo, or young bulb, may be seen projecting from the point of the ovule while the flower is fresh and lately blown, and the germ I believe not fecundated; and the point from which it issues appears to be unconnected with the germ, and consequently not the point by which the ovule is fecundated.

HYMENOCALLIS.

Bulbus subrotundus. *Folia* bi-multifaria. *Scapus* solidus, 2-angularis, floribus effetis curvatim depressus. *Umbella* 2-21-flora. (*Flores* albi, odoratissimi). *Spatha* bifida. *Germen* sessile vel subsessile, trigonum, triloculare, trivalve. *Loculi* 2-6-spermi. *Ovula* oblongo-obovata, in fundo loculi erectè posita, albumine solido à membranâ non separabili; embryon albumini conforme, dimidio minus. *Tubus* cylindricus obsoletè angularis, germine gracilior. *Laciniæ* æquales, patentes, flaccidæ, coronæ aliquando adnatæ. *Corona* infundibuliformis, staminifera. *Filamenta* paria, longa, flaccida. *Antheræ* longæ, hinc quartâ parte, hinc trinis incumbentes, *Pollinis* superficie scabrâ. *Stylus* longus, flaccidus. *Stigma* rotundum, minutissimè fimbriatum, dein viscosum. *Semina* magna, carnosa, integumento viridi non separabili, sæpe capsulam immaturè rumpentia. *Incolunt* plagas occidentales. *Species*.

* 1. Speciosa. var. longè-petiolata. *Bot. Mag.* 1453.
* –. var. 2. Humilis, petiolo brevi.
* –. var. 3. Angustifolia, foliis semi-recumbentibus petiolo brevi.

* 2. Amœna. *Bot. Mag.* 1467. P. Fragrans. *Redouté.*
* —. var. Ovata. *Bot. Reg.* 43. P. Ovatum.
* 3. Guianensis. *Bot. Reg.* 265.
4. Undulata. *Kunth* 1. 222.
* 5. Expansa. *Bot. Mag.* 1941. Species maxima?
* 6. Pedalis. *Sp.* inedita, floribus pedalibus; tubo 7, limbo 5-unciali, loculis 5-6 spermis; foliis magnis, acutis.
7. Patens. *Redouté. Ker Journ Sc. and Arts. Sp.* inter Expansam et Caribæam media.
* 8. Caribæa. *Bot. Mag.* 826.
* 9. Angusta. *Bot. Reg.* 221.
* 10. Tenuiflora. *Sp.* inedita. Angustæ affinis, foliis angustioribus, tubo longiore.
* 11. Litoralis. *Jacquin.* Pancratium Litorale.
* 12. Disticha. *Bot. Mag.* 1879. Dryandri. *Ker Journ. Sc. and Arts.*
* 13. Crassifolia. *Sp.* inedita, foliis magnis, crassis, suberectis, vaginantibus, obtusè acuminatis; laciniis angustis, coronâ parvâ.
* 14. Rotata. *Bot. Mag.* 827. P. Rotatum, pluriflorum.
* 15. Mexicana. *Bot. Mag.* 1082. P. Rotatum, biflorum.

Huic generi referenda videntur,

16. Quitoensis. *Sp.* inedita Peruviana ex Quito in *Herbar. Lamb.*—*Pavon.* Uniflora, tubo 4½-unciali, coronâ 2-unc. laciniis 3½-unc.
17. Caroliniana. *Catesby Carol.* 3. 5.

Bulb roundish. *Leaves* irregularly bifarious, not absolutely multifarious. *Scape* solid, with two angles, after the flowering bent to ground. (*Flowers* white, very fragrant.) *Umbel* from 2 to 21-flowered. *Spathe* bifid. *Germ* sessile or subsessile, triangular, 3-celled, 3-valved. *Cells* from 2 to 6-seeded. *Ovules* oblong-obovate, standing erect and attached to the bottom of the cells, with solid albumen inseparable from the outer membrane; the embryo within of the same form, and about half as big as the ovule. *Tube* cylindrical obsoletely angular, slenderer than the germen. *Petals* equal, widely expanded, flaccid (white in all the known species), sometimes adhering to the cup. *Crown* funnel-shaped, bearing the filaments. *Filaments* equal, long, flaccid. *Anthers* long, attached at about a quarter of their length from one extremity. *Pollen* with a rough surface. *Style* long, flaccid. *Stigma* round, minutely fimbriated all over, becoming viscous. *Seeds* large, fleshy, with a green inseparable integument, often bursting the capsule before they are ripe. *Inhabit* the Western Hemisphere. *Species.* * 1. Speciosa. var. with long petioles. *Bot. Mag.* 1453.—* 1. var. 2. Humilis, with broad leaves and a short petiole.—* 1. var. 3. Angustifolia, with narrow leaves almost recumbent, and a short petiole.—* 2. Amœna. *Bot. Mag.* 1467.—* 2. var. 2. Ovata. *Bot. Reg.* 43. P. ovatum.—* 3. Guianensis. *Bot. Reg.* 265.—4. Undulata. *Kunth.* 1. 222.—* 5. Expansa. *Bot. Mag.* 1941. The largest species?—* 6. Pedalis; an unrecorded species, with flowers a foot long, the tube 7, the petals 5 inches long; cells 5-6-seeded; leaves large, sharp-pointed; introduced by Mr. Shepherd of the Liverpool garden.—7. Patens. *Redouté. Ker Journ. Sc. and Arts.* Species intermediate between Expansa and Caribæa.—* 8. Caribæa. *Bot. Mag.* 826.—* 9. Angusta. *Bot. Reg.* 221.—* 10. Tenuiflora, an unrecorded species allied to Angusta, with leaves narrower and more recumbent, and the tube longer than the limb, which in Angusta is shorter than the limb.—* 11. Litoralis. *Jacquin.*—* 12. Disticha. *Bot. Mag.* 1879. Dryandri. *Ker Journ. Sc. and Arts.* Leaves broader, rougher, more regularly bifarious than *Litorale*, tube shorter, being of the same length as the limb.—* 13. Crassifolia; an unrecorded species, with great thick leaves, nearly erect, vaginating, obtusely pointed; narrow petals, and small cup.—* 14. Rotata. *Bot. Mag.* 827.—* 15. Mexicana. *Bot. Mag.* 1082; two-flowered. *To this genus* *probably belong.* 16. Quitoensis. An unrecorded species from Quito in Mr. *Lambert's Herbarium*, with one flower, tube 4½, cup 2 inches long.—17. Caroliniana. *Catesby's Carolina*, 3. 5. Found by him in a bog on the Savanna river, otherwise unknown; and perhaps inaccurately represented. *Culture, &c.* The first 13 species thrive freely in the stove in a moderately strong loam freely watered. The 2d variety of Amœna (P. ovatum. *Bot. Reg.*) does not maintain itself distinct when raised by seed, and the breadth of the leaf is very variable in the species. Guianensis is nearly allied, and both species are liable to suffer from water lodging in the heart of the leaves. Expansa is the largest known species, measuring, when vigorous, four feet from the bulb to the point of the flower buds, which should measure ten inches. Crassifolia has only flowered with me once, about four years ago, and I sent the inflorescence to Mr. S. Edwards, and neglected to make any memorandum concerning it. The plant has some resemblance to Cyrtanthus obliquus, though much larger: the flowers somewhat resembling Caribæa, but, if I recollect right, with a longer tube. The bulb came from Florida. Rotata and Mexicana require a lighter soil, and will thrive in a peaty compost, having abundance of water in summer and very little in winter. The least drop of water lodging between the young leaves is fatal to them, which makes it very difficult to keep them in health. Rotata has the finest flowers of the genus, but with me it is invariably 4-flowered. A mule which I have raised by impregnating it with the pollen of Disticha, produces more flowers and disregards wet amongst the leaves. The existence of Caroliniana rests on the authority of a very bad plate in Catesby. As he has described the spot where it grew, it could probably be ascertained what his plant was. I suspect it was a many-flowered specimen or variety of Rotata. The name Hymenocallis was given by Mr. Salisbury in the Hortic. Transac. to this genus, distinguished by him from Pancratium by 2-seeded cells. I have adhered to his name, but the ground of separation stated by him is erroneous, as the cells are frequently 4-, and sometimes 6-seeded. I distinguish it by the structure and posture of the ovules and seeds, the filaments, the form and attachment of the anthers, the stigma, the occasional bursting of the capsule, and the adhesive roughness of the pollen. When there are four ovules in a cell, two are placed behind the others; when there are six, the additional two in a third row behind them, the hinder rows necessarily attached a little higher, but in the same erect posture. From the form and position of the embryo, the radicle might be expected always to issue at the point by which the seed was attached, but it is sometimes forced into an oblique direction by the growth of the seed, and issues through the side. I apprehend that the sharp-pointed embryo of Hymenocallis and Crinum is able to pierce the solid albumen, and does necessarily issue through the natural passage. Hence it happens that the seeds sometimes vegetate immediately when the embryo has an open vent, and other seeds from the same capsule will lie for a year, and perhaps perish unless relieved where the obstruction is too great. The radicle of Crinum sometimes runs along just under the integument, apparently unable to pierce it. The scape of Hymenocallis becomes bent to the ground by a powerful contraction of one side near the base, that of Crinum simply leans from flaccidity while the seed is ripening; which should have been added to the points enumerated in the Preliminary Treatise, p. 7. H. Speciosa is shortly pedunculated.

ISMENE.

Foliis annuis, semine rotundiore, tubo plùs minùs curvato, coronâ longiore, filamentis brevioribus, superioribus tribus in coronam cernuis, tribus inferioribus conniventibus et implexis, ab Hymenocallide discreta. *Species.*

* 1. Amancaes. *Bot. Mag.* 1224. Pancratium.
2. Calathinum. *Bot. Reg.* 215.
* 3. Nutans. *Bot. Mag.* 1561. P. Narcissiflorum. *Jacquin.*

Distinguished from Hymenocallis by annual leaves, rounder seeds, tube more or less curved, longer cup, shorter filaments, of which the upper three are bent downwards into the cup, and the lowest three conniving and crossing each other. *Species.* * 1. Amancaes.—2. Calathinum.—* 3. Nutans.—*Culture, &c.* The only difference between the cultivation of Ismene and Hymenocallis, is, that the bulbs of Ismene require to be completely dry during the winter, and will certainly perish if watered during the season of rest. Amancaes was separated from Pancratium by Mr. Salisbury (Hort. Trans.), under the name Ismene, without any statement of the points in which it differed. Nutans agrees with Amancaes in the curvature of the tube; Calathinum, which in foliage is closely allied to Amancaes, has the tube much straighter, but a little bent. The seeds of Amancaes, ripened at Mr. Griffin's, burst the capsule, as those of Hymenocallis generally do, but they were rounder and smoother, and, if I recollect right, the scape was erect and not bent to ground, like that of Hymenocallis. The seed of Nutans, represented by Jacquin, agrees in form with that of Amancaes. The cup of Ismene is not prolonged beyond the insertion of the filaments, as in Liriope, except in the intervals.

CHLIDANTHUS.

Scapus præcox. *Umbella* 2-7-flora. Germen erectum pedunculo brevi et tubo continuatum, trigonè ovale, 3-loculare. *Ovula* opacè carnosa, complanata, biseriatim cumulata marginibus vix imbricantibus, 22 vel plura in loculis singulis angulo interiori annexa. *Tubus* cylindricus angulis obsoletis. *Laciniæ* subæquales, semipatentes. *Filamenta* erecta, laciniarum basi extra tubum inserta, alterna (interiora scilicet) longiora. *Antheræ* erectæ, imâ parte filamentis affixæ. *Stigma* obtusum; vix lobatum? *Incolunt* Americam meridionalem. *Species.*

*1. Fragrans, floribus flavis, odoratissimis; tubo 3-4-unciali, limbo 1 et ½ unciali; foliis linearibus, erectis, glaucis.

Scape rising before or with the leaves. *Umbel* 2-7-flowered. *Germ* erect, continued straight by the tube and a short peduncle, triangularly oval, 3-celled. *Ovules* opaquely fleshy, flattened, heaped in two rows with edges scarcely lapping, 22 or more in each cell annexed to the inner corner. *Tube* cylindrical with obsolete angles. *Petals* half-spread, nearly equal. *Filaments* erect, inserted just without the tube, those attached to the inner petals longest. *Anthers* erect, attached at bottom. *Stigma* obtuse; scarcely lobed? *Inhabit* S. America. *Species.* *1. Fragrans; with from 2 to 7 yellow flowers, very fragrant; tube from 3 to 4 inches long, limb about 1 and a ½; leaves linear, erect, glaucous. *Observ.* Bulbs of this beautiful plant have been received by Lord Carnarvon from Buenos Ayres, and by Mr. Brookes of Ball's Pond from Chili. In both collections they flowered very soon after their arrival. The flowers which I inspected had lost their fragrance, which is said to resemble that of the Jonquil.

EUCROSIA.

* 1. Bicolor. *Bot. Reg.* 207. Not having seen its flower, I shall only add, that the leaves are glossy, broader, and less erect than represented, and the bulbs require rest in the autumn and winter.

POSTSCRIPT.

THE genus Strumaria would properly fall within the limits of this Treatise; but I have only flowered Strumaria filifolia; and as the genus is said to have some very singular variability in the style and filaments, I can only refer the reader to the Bot. Reg. 440. The species enumerated are, 1. Spiralis. *Bot. Mag.* 1383.—2. Rubella. *Jacq. ic. rar.* 358.—3. Stellaris. *Jacq. hort. Sch.* 71.—4. Crispa. *Bot. Mag.* 1363.—5. Gemmata. *Bot. Mag.* 1620.—6. Undulata. *Jacq. ic. rar.* 360.—7. Linguæfolia. *Ib.* 356.—8. Truncata. *Ib.* 357.—9. Angustifolia. *Ib.* 359.—10. Filifolia. *Bot. Reg.* 440. The style in this genus is said to be variable, and subject to singular protuberances near the base, and the filaments to be " sometimes entirely distinct, at other times variously monadelphous, at others partly monadelphous and partly gynandrous; three alternate ones adhering to each other, the rest to the style." This is not very satisfactory, and it will perhaps be found necessary to detach some of the species from this genus. It should be carefully ascertained whether there is any difference in the anthers, germ, ovules, and seed, coinciding with the variation of the style, which would make a separation clearly expedient; whether the difference of style and filaments goes together; and on the other hand, whether any such variations take place in a less degree amongst individuals of the same species. The enlarged base of the style, the divarication of the filaments, and the non-undulated petals separate Strumaria filifolia from Nerine.

Two species of Crinum, supposed to be unrecorded, have been sent to Lord Carnarvon from New Holland, one said to be from the interior, of which a bulb, now in my collection, does not appear at present distinguishable from young plants of C. Americanum, but I am told that the stronger bulbs have acquired a different appearance and more glaucous leaf; the other said to have been collected by the surveying vessel in Water Island, on the N. W. coast, having a round bulb and leaves resembling those of C. Erubescens, but much narrower. Bulbs have also been sent from Sumatra, by Sir Stamford Raffles, of a species of Crinum apparently a variety of C. Sinicum, from which its leaves are scarcely distinguishable, but a little thinner. It appears, by the same channel, that C. Amabile produces seed in Sumatra, though it has proved barren here. On examination of a flower from a scape just produced by Lord Carnarvon's bulb of Crinum Augustum, the most material distinction between it and C. Amabile appears to be that the style, which in the latter is near an inch longer than the filaments, in Augustum is about as much shorter than the filaments. The peduncle of Augustum is shorter, and the petals broader, having their inner surface stained with the red colour, which is only seen through in those of Amabile. The germ which I dissected had no distinguishable ovules. The flowers were not quite so long as those of Amabile when in perfection, but the flowers of that plant are sometimes smaller at this season than at a more favourable period of the year. I have already mentioned that the leaves of Augustum are obtuse, of Amabile acute. The affinity is so great between C. Amabile and Augustum, between Toxicarium and Brevifolium, between Defixum and Ensifolium, between Pedunculatum, Canaliculatum, and Exaltatum, and in leaf and bulb at least, for I have not seen their inflorescence, between Lorifolium and Longiflorum, that if I had not found them already named and distinguished, I should have been inclined to consider the secondary plants as permanent varieties. The Berbice variety of C. Erubescens has flowered at Mr. Lee's with white petals and dark anthers. It was found on the banks of the Corantyne river. It should be mentioned, that in some instances, when the seed of Crinum has been rather deficient in sap, I have found it possible to detach small portions of the integument from the albumen; but not from seeds of Hymenocallis, which have the integument thinner. In both, when the young plant is near a year old, the albumen becomes entirely exhausted, and the integument remains hollow and empty. A mule from Erubescens by Scabrum has been just added to the hybrid sorts of Crinum. Mr. Lee has an Hymenocallis which he calls Spiralis, with reflex petals spirally twisted, but I suspect that it is a singular accidental variety of H. Amœna.

Since the foregoing pages were printed, I have dissected a seed of Coburgia Reticulata, but it was imperfect, having no germ. Its form was roundish, but with three obsolete angles, and a little pointed where attached to the capsule. The outer integument was black and thin, like that of Hippeastrum, but not extended to a greater breadth than the inner coat, which was thick and empty. If the seed had been perfect, I apprehend that the thick inner coat would have been a solid mass of albumen, enclosing the embryo. The seed of Hippeastrum has an outer black integument, extended to a greater breadth than the inner, and consequently projecting with an empty foliaceous margin; an inner integument equally separable, but thinner than the outer, and nearly fitting the albumen, which is flat, obovate, and pointed at bottom, the radicle of the embryo being approached to the point of the inner, but not to the margin of the outer integument.

On close examination of the seed of Zephyranthes Tubispatha, I find the aperture in the outer integument to be much less apparent than in Z. Atamasco.

The species of Hippeastrum, mentioned above as 5. Equestre var. glabrifolia, having since flowered, I have ascertained that it is quite distinct from Equestre. It should stand in the enumeration * 6. Stylosum. Its bulb is flattened, like that of Equestre; its leaves formed like those of Equestre, but more glossy and very purple near the base. Its scape taller than that of Reginæ. Its tube in form and posture like that of Reginæ, being less slender and pendulous than Equestre. The beard, as that of Reginæ, in greenish white tufts. Its petals smaller than those of Reginæ, but not widely expanded and curved back like Equestre. Its filaments ⅘ths of an inch longer than the coroll, standing out before the expansion of the flower. The style, which in Equestre is more than an inch shorter than the flower, in this is an inch and a quarter longer than the limb. The stigma with very short round lobes. The star very short and green, not spread into broad rays like that of Equestre, or prolonged into white stripes, as in Reginæ. It should have been mentioned that seedlings of Hippeastrum, till they arrive at the age of puberty, do not seem to require a season of rest. Hippeastum Pulverulentum and Stylosum will be figured in the 49th vol. of the Bot. Mag.

On examination of a fine umbel of Ammocharis Falcata, I find its ovules and pollen exactly accord with those of Coranica. On reference to the definitions of Ammocharis and Boophane, I find, however, that I have inadvertently admitted an error at the time I made the separation of the two sections. The filaments of Boophane are spreading, and the style straight; of Ammocharis, declined and curved upwards. I observe that a singular bending takes place in the peduncle or germ of Ammocharis, sometimes laterally, sometimes upwards, but generally downwards, which disappears again when the flower is nearly withered. The stigma of Ammocharis is more fimbriated when perfect than appears in the engraving which was made from a cut specimen of Coranica, and it is irregularly obtuse, sometimes appearing bifid. The description of the germ as sometimes turbinate was taken from specimens in which the seed was setting. In the young state the germ of Falcata and Coranica is triangularly oblong-oval, furnishing another feature of affinity to Crinum. I have observed in species of all the subdivisions of Crinum, that the alternate anthers are not attached exactly in the middle. In Amm. Coranica I observed a similar variation, but I cannot assert that it is a decided feature. The fine umbel, with 31 flowers of Ammocharis Falcata, now before me, was obtained by the following treatment. The pot stood dry last winter in the greenhouse. In the spring it was well watered, and the earth from that time kept in a moist state. The summer being very cold, in July its leaves, which had grown to a considerable length, appeared to be making no further progress. It was then placed, together with several of the smaller species of Crinum, in a small hotbed-frame, of which the light was kept constantly a little open to let the steam escape. At the beginning of September it was removed into the stove, and the next day its bud appeared. I suspect that the species of Crinum which do not flower readily, should be kept cooler and dryer in the winter, and their growth promoted by moist heat in summer.

Nerine Pulchella, a species with glaucous leaves, and very pale purplish striated flowers, though placed amongst the Distortæ, furnishes in fact a link between the two divisions, for its style and filaments are curved, but its petals and germ very little distorted. It is fertile, and I have every reason to believe that it is a natural species.

In the division of the foregoing genera it will be observed, that I consider the structure, attachment, and posture of the ovules, and the structure of the germ and of the seed, to be the most important female features, the structure of the style and stigma not being overlooked, though subject to variation: the insertion of the filaments into the corolla which bears them and is in fact a part of the male portion of the flower, and the attachment of the anthers to the filaments, to be not less important than the form of the corolla: the inclination of the style and anthers, the expansion of the petals, and the posture of the germ, to be features of considerable, but of inferior importance: the habits and localities of the plants to be valuable additions, when found to coincide with the more decisive features of separation. It is strange, that in the most ample former descriptions of the several species herein detailed, the ovules, the seeds, the insertion of the filaments, and the attachment of the anthers, have been scarcely noticed.

I cannot pretend to class Amaryllis Miniata, *Humboldt et Bonpland.* Nervosa, *Ib.* Tubiflora, *L'Héritier Sert. Angl.* Maculata, *Ib.* Chilensis, *Ruiz et Pavon.* Bicolor, *Ib.* which are S. American species, concerning which our information is very imperfect, but certainly not agreeing with the Linnæan Amaryllis.

October 1821. W. H.

CORRIGENDA.

P. 7. *After fig.* 11. *strike out the three lines beginning,* The germ being, &c. *and insert in their place,* The scape not having two angles, and after the flowering not becoming bent by contraction, but leaning from flaccidity.

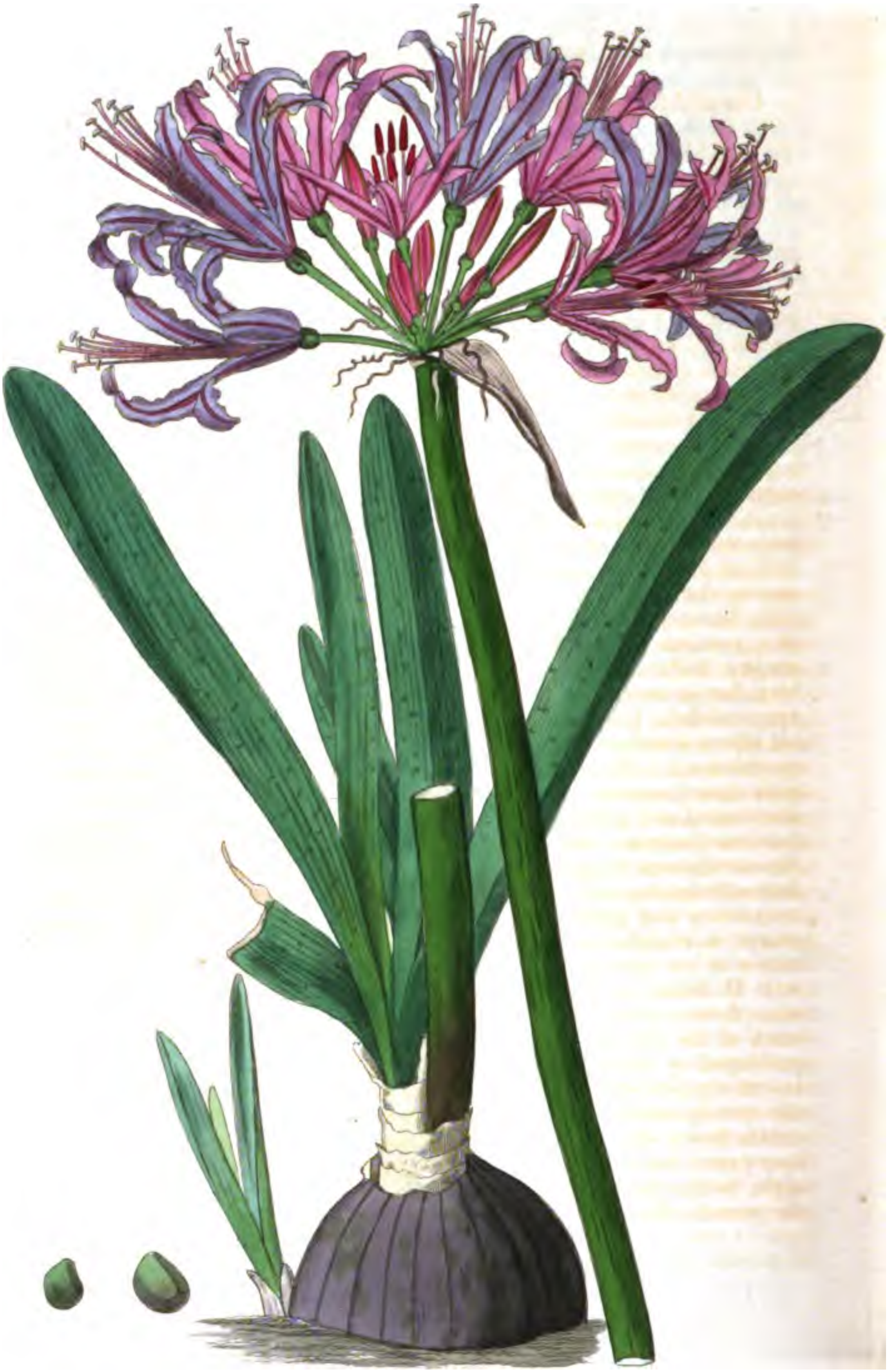
Ammocharis. p. 17. *For Germen* trigonè turbinatum vel obovatum pedunculo directè continuatum *read Germen* trigonè oblongo-ovale, pedunculo sæpe floribus expansis flexo directè continuatum. *For Filamenta* patentia secundum floris posituram recta aut vix curvata *read Filamenta* unà cum *Stylo* declinata apice sursum curvato. *Strike out Stylus* eàdem ratione rectus, aut vix curvus. *In the English, read Germ* triangularly oblong-oval, continued from the peduncle, which is often irregularly bent when the flowers are expanded. *Filaments* and *Style* declined, with the point bent upwards.

Boophane. p. 18. *insert* *Filamenta* patentia; *stylus* rectus. *Filaments* spreading; *style* straight.

Crinum. p. 21. *For Umbella* 1-60-flora *read Scapus* 1-60-florus. *P*. 22. *in the English*, *Scape* from 1- to 60-flowered. *For* C. Erubescens var. Berbicensis *read* C. Erubescens var. Corantyna.

Hippeastrum. p. 31. *For* testâ externâ nigrâ *read* testâ externâ latiore nigrâ, membranâ internâ albumini magis conformi et acutè obovatâ, albumine complanato, embryi radiculâ membranæ internæ basi, sed non umbilico exteriori, approximatâ. *In the English*, *for* the outer shell black *read* the outer shell wider, black; the inner membrane acutely obovate and more conformable to the albumen, which is flat, the radicle of the embryo being approached to the base of the inner membrane, but not to the aperture in the outer shell.

P. 31. *for* * 5. var.? Glabrifolia *read* * 6. Stylosum; *and p*. 32. *for* * var. smooth-leaved *read* * 6. Long-styled. *In both pages for* 6, 7, &c. *read* 7, 8, &c.



Herbert. del. *Nerine Hybrida.* S. Watts sc

NERINE VERSICOLOR,

Curvifoliâ-undulata hybrida. Changeable-coloured mule Nerine.

Class and Order.
Hexandria Monogynia.

Generic Character.
See page 18.

Hybrid Character.

Nerine Versicolor, Curvifoliâ-undulata hybrida, bulbo viridi-purpurascente; foliis ¾ unciæ latis, sub-glaucis, obtusè acuminatis; scapo viridi, 18-unciali, $\frac{3}{16}$ lato, basi aliquando purpurascente; umbellâ circiter 16-florâ, bracteatâ; pedunculis uncialibus; germine loculis circiter 6-spermis, ovulis plerumque emarcidis; corollæ laciniis semipatentibus undulatissimis apice reflexo, 1¼ uncialibus, ¼ unciæ lǎtis, roseo-rubentibus, dein cæruleo-purpurascentibus costâ mediâ vel striâ rubente; stylo et filamentis roseo-rubris inferne purpurascentibus, stylo filamentis longiore, corollâ breviore, denuò assurgenter curvato; stigmate albo.

About four and twenty seedling bulbs of this beautiful Mule Nerine were raised six years ago at Spofforth, from Nerine Undulata, impregnated by Curvifolia. No difference has been observed amongst the seedlings, excepting that some have the leaves a little more glaucous than others, and some have the scape green and others a little purpurascent. The bulbs are of a greenish purple, the leaves rather glaucous, ¾ of an inch wide; the scape a foot and a half high, $\frac{3}{16}$ of an inch wide; peduncles about an inch long, flowers about 16; the laciniæ of the corolla ¼ of an inch wide, 1¼ long, very undulate, half-expanded with the tips bent back, rose-coloured, changing after a few days to blueish purple, except the middle rib or stripe, which continues red. The cells, which in Undulata are 2-seeded, and in Curvifolia about 8-seeded, in the mule are generally 6-seeded, but the ovules are discoloured and probably imperfect. In Undulata the germen is always bent downwards by the premature growth of the seeds in the upper cell, by which the corolla and filaments become distorted; in the mule the germen continues straight as in Curvifolia. In Undulata the filaments are very liable to irregularity and generally curved downwards, those of the mule approach nearer in straightness and regularity to those of Curvifolia: the style becomes at last bent upwards, but not so much bent, nor is it at first so short, as in Undulata, of which the style is by degrees considerably prolonged. In some flowers of the mule the style is entirely wanting. The style, or one or more of the filaments of the Amaryllideæ, are occasionally abbreviated or prolonged by accident. In Nerine Undulata they are particularly irregular, in consequence of the distortion of the flower, but in its most perfect state the correspondence of the alternate filaments is evident. Seedlings of Undulata flower when about three years old; the strongest of the mules blew at four years; but seedlings of Curvifolia seem not likely to flower till they are eight or nine years old. The figure represents a full-sized seed of each of the parents, the largest being that of Curvifolia.

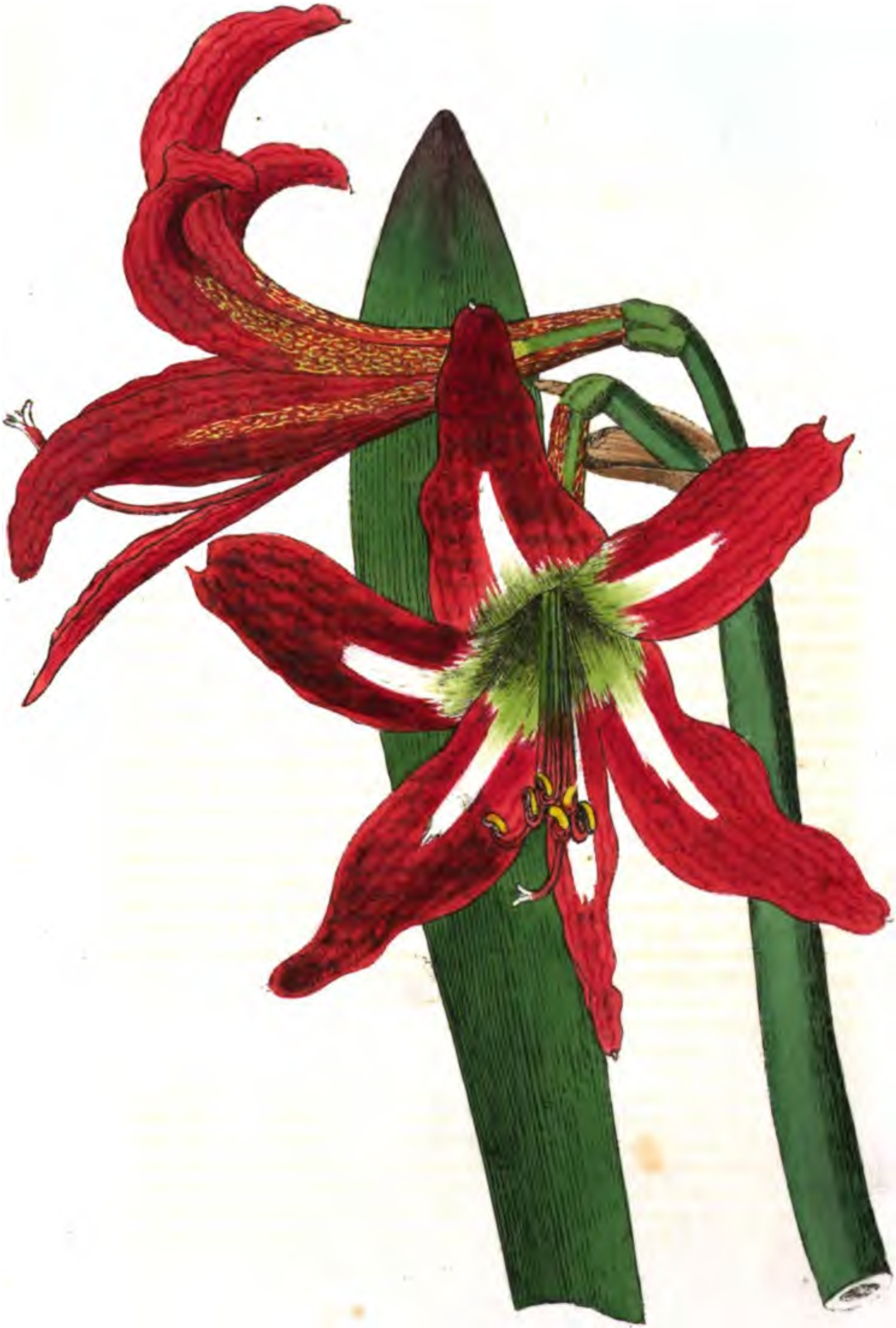
HIPPEASTRUM SPLENDENS,

Bis hybridum, Rutilo-Equestri-vittatum.—Splendid Knight's-star-lily, twice muled.

Class and Order.
Hexandria Monogynia.

Generic Character.
See page 31.

In consequence of a confusion of labels I have some doubts whether the female parent of these mules was produced from Vittatum by the pollen of Reginæ or of Equestre. Its flower was of a very bright scarlet with a white star, and having been deprived of its anthers and impregnated by the dust of Rutilum, it produced 50 or 60 seedlings, most of which have now flowered, varying a little in shape and colour, and some of them scarcely distinguishable from Rutilum, except by a little vestige in the mouth of the tube of the beard, which is derived from the two other species. The flower which is represented was amongst the brightest of the seedlings, but no painting can approach the splendour of the natural hue. One alone of them had the coroll considerably larger. The coroll of Mule Amaryllideæ seems to follow the size of the male parent, which might indeed have been expected, since the coroll bears the filaments, and therefore belongs to the male portion of the flower. The strong scent of Vittatum is entirely lost in this second cross, all the seedlings having proved scentless, like Rutilum, with which they also conform in the production of an infinity of offsets, but the offsets are not blind or dormant, like those of Rutilum. They flower freely in a cool greenhouse, appearing to be as hardy as Vittatum, and will doubtless succeed well out of doors. The leaves are narrower than those of Vittatum, and they will bloom in a much smaller pot.



W. Herbert del. & lithogr.

Hippeastrum bis Hybridum,

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